

# **college**

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# **business**

**MAY 1960**

## **They Dared To Be Different**

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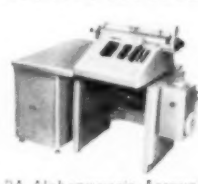
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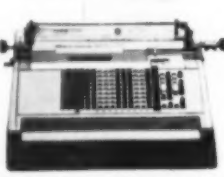
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AMONG THE AUTHORS: Victor Danilov, director of public relations at the University of Colorado, describes the efforts made by six liberal arts colleges in this country to experiment with their curriculum offerings. Mr. Danilov was director of public relations at Illinois Institute of Technology before accepting his present position. . . . Rowan Wakefield, director of public relations at Union College, Schenectady, N.Y., expresses his philosophy regarding the college viewbook—as a medium for attracting new students and as a tool for institutional interpretation. . . . Robert E. Alexander, California architect, asserts that a master plan of the college campus is imperative and that it guarantees a successful outcome if the subject is properly approached. Mr. Alexander has had extensive college and university experience.





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## QUESTIONS AND ANSWERS

### Custodial Services

Question: Is there any reason why it is not practical for a residence hall division to maintain its own custodial and maintenance staff separate and independent of the university's buildings and grounds department? — G.B., Fla.

ANSWER NO. 1: Custodial routines in residence halls are different from those in general university buildings. The usage that residence buildings receive requires schedules, methods, materials and personnel classifications that are quite different from those in the normal physical plant operation. Therefore, unless an operation is so small that it cannot justify separate supervision, it seems logical that a residence hall division should maintain its own custodial staff.

In general, a separate maintenance staff is practical for a residence hall division on the basis that the division can have positive and direct control of the scheduling of maintenance work and of the performance of the maintenance staff. However, the work load for some crafts may be such as to require only the services of a part-time staff and the hiring and keeping of part-time employees is difficult. In such cases, it seems desirable to look to the buildings and grounds department to perform this work on a requisition or work order basis.—VERNON KRETSCHMER, director of auxiliary service, University of Illinois.

ANSWER NO. 2: To the full extent possible, all services on a college campus should be centrally managed. This would include such departments as maintenance, purchasing, mail and police.

Whenever an operation becomes so large as to be cumbersome or unwieldy, it might then be divided into units, with a unit assigned to the

campus area calling for the service. However, the over-all management should remain under central control while the detail is in the hands of the specific area manager. This form of management makes for better utilization of personnel and equipment. —T. N. MCCLURE, business manager, University of Rhode Island.

### Student Loans

Question: If college and university administrators find that heavy demand for student loans is exhausting the institution's loan funds, should the institution borrow money in order to make additional student loans available to meet the need? — E. N., N. Y.

ANSWER: If it is necessary to borrow funds to make up the institution's portion of a student loan program utilizing federal funds under the N.D.E.A., certainly the institution should borrow the needed money.

If the institution's problem is not one of providing its portion of funds required under the federal student loan program, there is a greater question to be raised over borrowing funds to finance student loans.

If the institution's student body is primarily local in character, the institution should urge local banks to establish lending arrangements directly with student borrowers. The institution can be very helpful to a bank inasmuch as it can provide important character reference information.

If the student body is not primarily of local origin, the institution might still reasonably borrow money for a temporary period to meet loan fund shortages. It might also reasonably borrow amounts for longer periods if the total amounts borrowed were modest in relation to the institution's total resources, and if the cost of borrowing did not exceed the rate of interest chargeable to students.

However, the seeming answer to this problem would be an appeal to the friends of the college for gifts to finance the student loan fund. Student loan funds are an eminently appealing purpose for gifts in the minds of donors. — GORDON P. FREESE, administrative vice president, Stephens College, Columbia, Mo.

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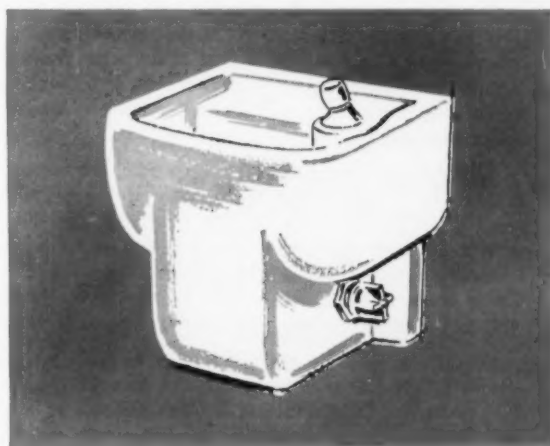
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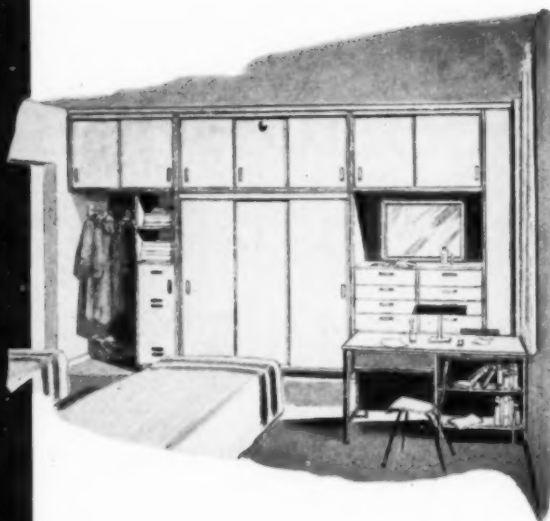
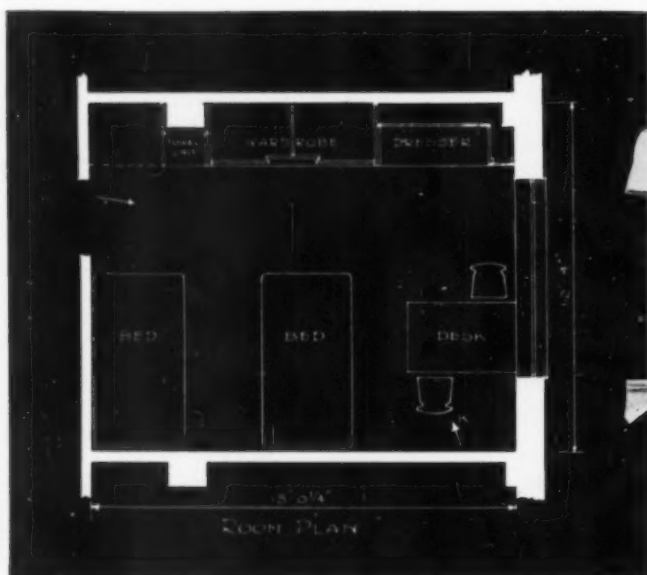
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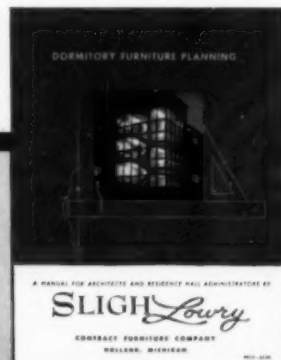
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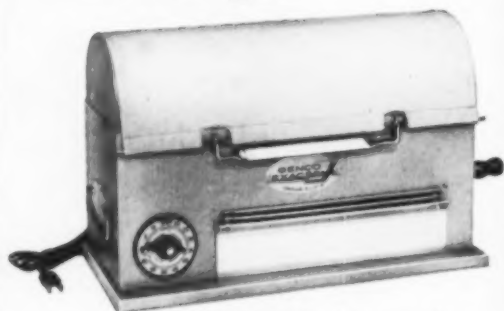
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If you've despaired of ever finding a drapery fabric that meets all your requirements, it's time you checked SARANSPUN. For delicately lovely SARANSPUN fabrics have a mohair or linen hand—yet they're tough enough to outlast your best expectations. SARANSPUN isn't brittle — can't crack. It's inherently and permanently flameproof, unaffected by moisture or humidity — which means no "elevator action," and SARANSPUN may be washed or **dry-cleaned** with easy-to-read instructions. Act now—there's a SARANSPUN dealer handy.



80% SARAN  
20% VISCOSE RAYON

SARANSPUN WOVEN BY J. P. STEVENS & CO., INC.

SARAN FIBERS PRODUCED BY THE FILAMENT AND YARNS DIVISION OF

THE NATIONAL PLASTIC PRODUCTS COMPANY

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MANUFACTURERS OF NEVAMAN DECORATIVE LAMINATES





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Manufacturers of Prestige Quality Vinylast, Terralast, Classic Marble,  
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Vendo Automatic Venders  
let you offer a wide variety  
of campus favorites including  
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foods, sandwiches, pastry,  
carbonated beverages,  
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Vendo Automatic Venders offer a practical and *profitable* answer  
to your need for expanded food service on the campus.

These handsome machines serve appetizing hot and cold food, snacks and  
beverages around the clock—around the campus—*automatically!*

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where students and faculty can relax and help themselves to refreshment  
they want . . . whenever they want it. Vendo Automatic Venders serve,  
collect and *even make change*. They require little floor space . . .  
can easily be installed in any location. Investigate the many  
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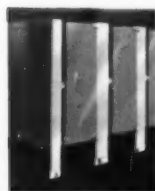
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This is the continuous baking oven at Weis where freshly enameled panels and other components move by conveyor



through 150 feet of infrared heat that gives them their uniformly hard and durable finishes. Temperature throughout the cycle is automatically

controlled for maximum effectiveness. Raw materials to finished product, Weis toilet compartments and cabinet showers benefit from the finest workmanship and best modern processes available. That's why Weis is specified for America's most important buildings. Your Weis representative will be happy to provide complete details, or send coupon below.

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Dept. K-1302, Elkhart, Indiana

Please send information on Weis toilet compartments and cabinet showers.

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firm/school \_\_\_\_\_

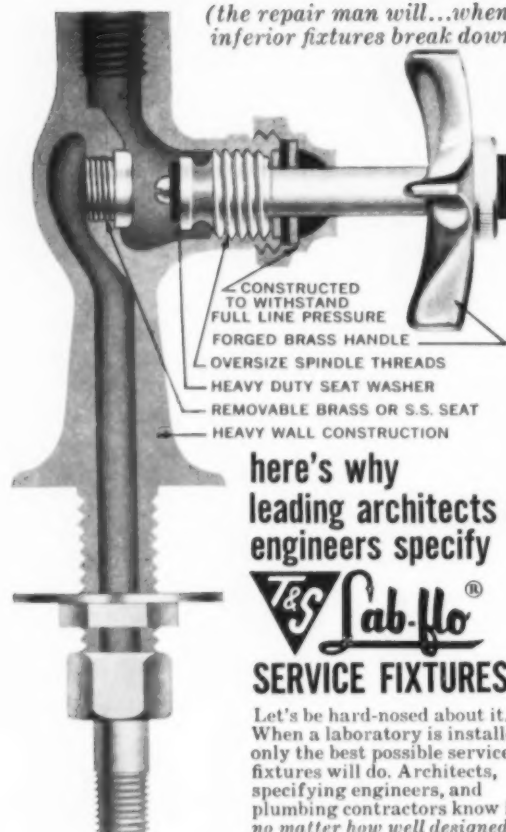
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# LOOK "UNDER THE HOOD" of LABORATORY SERVICE FIXTURES

(the repair man will...when  
inferior fixtures break down)



here's why  
leading architects and  
engineers specify

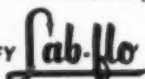


**SERVICE FIXTURES**

Let's be hard-nosed about it. When a laboratory is installed, only the best possible service fixtures will do. Architects, specifying engineers, and plumbing contractors know it no matter how well designed the science equipment is, it will operate only as well as its fixtures.

It's a fact that there are important differences in fixtures used for laboratory furniture and it takes such experts to recognize them—even the busy repair man on his frequent trips to replace ordinary washers, re-grind worn seats, or to install whole new units because of stripped threads. That is why T&S Lab-Flo Service Fixtures, heavy duty engineered and constructed throughout especially for laboratory use, are preferred for wood or metal installations of any size or design. Lab-Flo is built for strength, safety, and ease of handling in the laboratory. No thin walls or shallow threads to break down, no weak parts to give out when full line pressure is applied. Look at a cross-section of a Lab-Flo fixture and you will see a cross-section of quality at its finest. You pay for quality—why not get it? You will...when you specify Lab-Flo right down the line on your next laboratory installation, new or remodeled.

THOSE IN THE KNOW SPECIFY



See your **Lab-Flo** dealer or write for Catalog

SERVICE FIXTURES • HOSE COCKS  
REMOTE CONTROLS • RECEPTACLES

Refer to 1960 Sweet's Catalog, Code: 27b  
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**PRECISION-BUILT SCOREBOARDS**



Model 1250-2 Football Scoreboard and Timer, nationally famous for modern design and color dynamics. Overall size, 8'4" x 18'4".

SCOREMASTER SCOREBOARDS provide the utmost in accuracy, readability, ease of installation and low maintenance. They are your assurance of fast, simple, dependable operation. It's good business to invest in a Scoremaster scoreboard.

Write today for literature on all Scoremaster football and basketball boards, including the SPORTSMASTER, the portable electric board designed specifically for intramural activities.

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LEADER**



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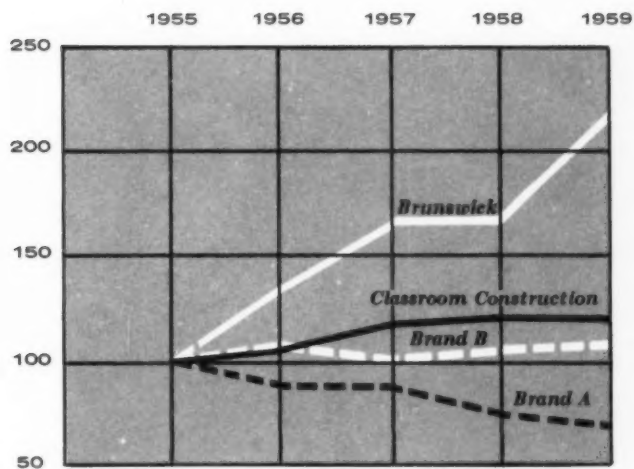
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PREFE

SINCE ITS INTRODUCTION  
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IN 1953, MORE DISTRICTS  
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Brunswick 1959 Sales  
Gain 32% over previous  
year.

SWICK

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*Presenting*

*the distinctive...new*

## CONTEMPORARY SERIES

by **Brunswick**



*the ultimate in beauty...  
function...durability...comfort*

In any language it's a functional grouping of Brunswick Study Top Combinations which awaits the students of this Junior High language arts class. Note 2- and 4-tier cabinets, color coordinated with seating to create a neutral atmosphere with slight stimulation.



\* **Designer's note:** The new Brunswick Contemporary Series is "evolutionary" in concept. It will blend perfectly in every way with your current Brunswick Furniture.

*contour molded of exclusive LIFETIME FIBERGLASS in six beautiful COLORS for learning*

The new Contemporary Series is Brunswick's finest expression of our continuing pledge to satisfy your school furniture needs... in terms of better learning... lasting value.

The Contemporary Series is available now for immediate delivery.

THE BRUNSWICK-BALKE-COLLENDER COMPANY, School Equipment Division, Chicago 5





Electronic engineers and chemists of the future find tough subjects easier, thanks to comfortable tablet arm chairs (arranged for lecture) and practical

project table groupings. Bookshelves and 2200 series cabinets provide ample, efficient storage for materials, projects, books.

The new Contemporary Series by Brunswick is everything you dreamed it would be...everything you asked for...

**Beauty—beyond description.** From the *flowing* lines of the one-piece body-molded seating, to the gracefully tapered leg . . . from the Scandinavian-modern edges and subtle parchment pattern of the writing and table surfaces . . . you'll find an infinite attention to design, detail and integrity.

**Functional—in every respect.** All famous Brunswick functional "firsts" plus scores of new teaching and learning advantages are built into this incomparable series. Side-entry, foot angled Book-Store . . . Ophtho-Light (vision-saver) melamine surfaces . . . Float-Action desk top operation are but a few.

**Durable—beyond the years.** New Lifetime Fiberglass has been laboratory and *field* tested to withstand the most rugged in-school use . . . is impervious to heat and cold . . . will not mar, scratch or dent. New melamine writing and work surface has same rugged properties . . . indeed, indestructible!

**Comfortable—just try it.** All seating units are body-molded—compound curves conform to body contour. Eight sizes, each individually proportioned combine with resilient uni-structure frame to give added hours of movement free, yet disciplined comfort, for well mannered, at ease students.



An attractive Brunswick-furnished Business Education Classroom, color keyed to create an industrious environment conducive to the development of typing and business machine motor skills. Note strategic placement of storage cabinets, cabinet sink, and bookkeeping desks.

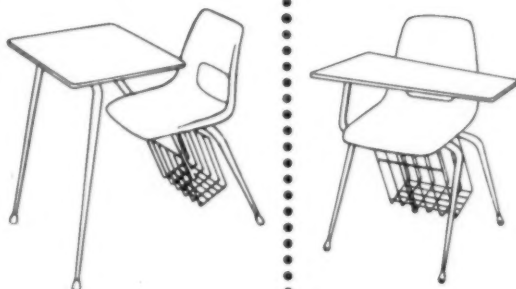


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## LIFETIME FIBERGLASS

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- Produced exclusively by Brunswick
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- Virtually indestructible over the years
- Won't chip, dent, scratch or mar
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- Compound curves molded to body contours
- Added comfort through added resilience



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 can make the difference  
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**Food Warmer No. 304**  
**Only \$13200\***

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**DUKE...Pioneers in  
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Dependable, low-priced, waterless Aerohot food warmers economize on food, fuel, labor. Selective heat control in each compartment assures proper temperature to keep the full flavor of particular food. Fully insulated with Fiberglass. Stainless steel top for maximum sanitation and durability. Also available in 3 and 5 section models.

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**Portable Cold Pan Units.** Stainless steel insulated ice pans. Perfect for cold buffets.

**Cafeteria Counters**...dependable, lowest priced counters on the market.

**Work Tables, Bakers' Tables** in convenient sizes, and models. Mail coupon today.

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 2305 N. Broadway, St. Louis 6, Mo.

Please send me more information on following (check squares):

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Establishment \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



# Imaginative Engineering Puts to Work on *DAYLIGHT*



Mike Best and Ed Kralovec, mechanical engineers on the Madonna school, shown discussing job details with two of their colleagues.

Kralovec & Best, consulting engineers, went one step further in their heat and ventilation design for the new Madonna High School, Chicago — they applied pneumatic control to skylight louvers.

To meet the lighting requirements of the combination auditorium-gymnasium, architect C. I. Krajewski used a system of sky domes equipped with adjustable light dampers. How to control the dampers quickly and efficiently for change-over from plenty of daylight for gym activities to total blackout for movies, etc., was the problem presented to the consulting engineer.

Kralovec & Best's solution was — twenty-nine 4-inch powerstroke piston damper motors — one for each of



Sky domes, inside and out. Each contains a set of light dampers, all of which operate simultaneously when darkness for movie showings is desired in the combination auditorium-gymnasium.



# Powers Pneumatic Control



## MADONNA HIGH SCHOOL

Chicago, Ill.

Architect: C. I. Krajewski, Chicago

Consulting Engineers:

Kralovec & Best

Chicago

Heating Contractor:

Windsor Heating Co.

Chicago

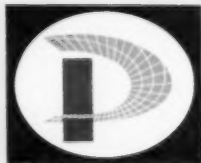
the sky dome louvers on the roof — energized instantly from a single Powers pneumatic selector switch in the projection room. Turning the switch activates air pressure at 15 psi. through a Powers Series 500 Pilot Valve to the motors to close the light louvers. When the switch is turned off, pressure is released . . . and the louvers swing open to admit light.

Pneumatic control of daylight in Madonna school is fast, easy and quiet — a definite convenience for the projectionist or instructors, an operational bargain for the school, maintenance-wise.

The complete heating system, as specified by Kralovec & Best, includes two hot water converters controlled at fixed temperatures. Individual classrooms are heated and ventilated by unit ventilators, controlled on the standard day-night cycle. Corridors, rest rooms, storage and locker rooms employ direct radiation controlled by Powers Day-Night room thermostats. For extra safety and comfort, hot water to all showers is controlled by means of a Powers Hydroguard Thermostatic Shower Control.

Here, then, is how imaginative engineering applied to pneumatic control can have unusual — but practical — results in an efficient, low cost system.

*Write for the latest Powers Catalog  
of pneumatic controls for schools.*



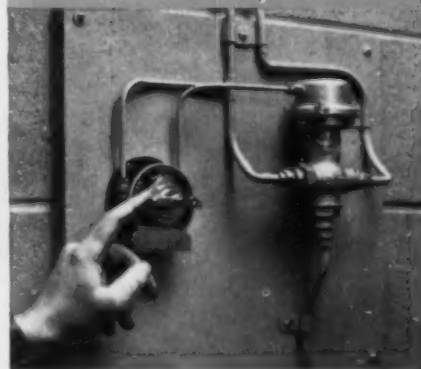
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MANUFACTURERS OF THERMOSTATIC CONTROLS SINCE 1891



A single pneumatic selector switch in the projection room actuates 29 sets of light louvers through 29 individual powerstroke motors.







# HOW WILL YOU SPEND \$16 BILLION?

Early in 1960, Dr. Ernest V. Hollis of the U. S. Office of Education estimated that a \$16 billion college construction expenditure will be needed between now and 1970 and that this sum will provide no more than an austerity program, against a need that provides ample justifications for a \$33 billion expenditure.

You who read COLLEGE AND UNIVERSITY BUSINESS, college and university presidents, business officials and business staff members, will be responsible for the wise expenditure of these construction dollars as they become available. According to Dr. Hollis, you will need \$5.5 billion to replace and rehabilitate existing instructional and housing facilities to "keep them safe for human use." You will need \$6.5 billion for new instructional facilities and \$4 billion for new campus housing

and feeding facilities to handle an enrollment that will reach nearly seven million by 1970.

As it has exclusively since 1946, COLLEGE AND UNIVERSITY BUSINESS will continue to provide a forum for the interchange of ideas on planning and ways and means of construction to help you get the most from this "austerity" program in terms of adequate facilities.

Also, of course, COLLEGE AND UNIVERSITY BUSINESS will continue to keep you up to date on the most alert and meaningful thinking on all other phases of college business administrative responsibilities, and in addition, product information from those manufacturers who are keenly interested in meeting your needs for equipment and materials to build, operate and maintain college facilities for instruction, housing, food service and recreation.

COLLEGE AND UNIVERSITY BUSINESS  
The BUSINESS magazine of higher education





# a compact college union at a compact price

## CPA'S PACKAGE

*Starts with* a thorough analysis of the college's needs by a staff which has extensive experience in college union planning and operations, business, engineering, construction, and architecture.

*Focuses on* a written program upon which college officials and boards can act.

*Ends with* a building tailored specifically to your institution's needs, finances, operations and goals.\*

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Satisfied students  
and college officials

Maximum operating efficiency

Guaranteed cost  
and quality

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*With regional offices in*

*New York - Ohio - Michigan - California*

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**11:00 A. M.**

**This movie is really sharp! Not a light leak anywhere.**

REASON: The windows in this room are light-controlled with Flexalum Audio-Visual Blinds. These blinds make any room theatre-dark anytime. Here's why: (1) more slats per height plus (2) patented notch in each slat that permits adjacent slats to touch, equals (3) no between-slat light leaks. (4) Light-trap channels eliminate around-the-edge light leaks.

**11:10 A. M.**

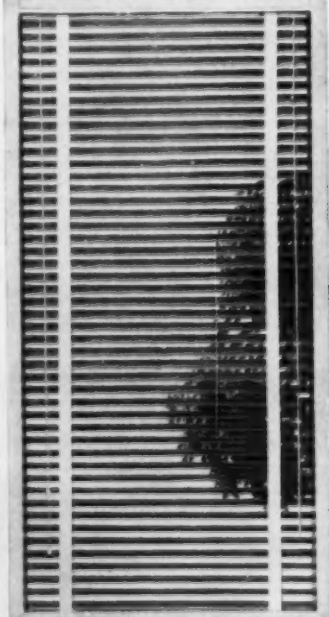
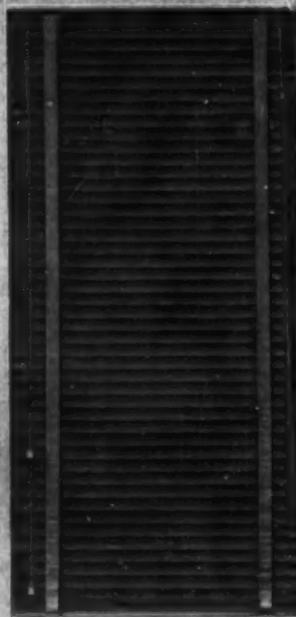
**The slides look great. Just enough light to take notes.**

REASON: You get just the degree of light control you need with Flexalum Audio-Visual Blinds. No other form of blackout covering allows you this flexibility. And Flexalum Audio-Visual Blinds will always stop and stay just where you want them. They're precision engineered to operate so flawlessly, they're guaranteed in writing for five full years.

**11:20 A. M.**

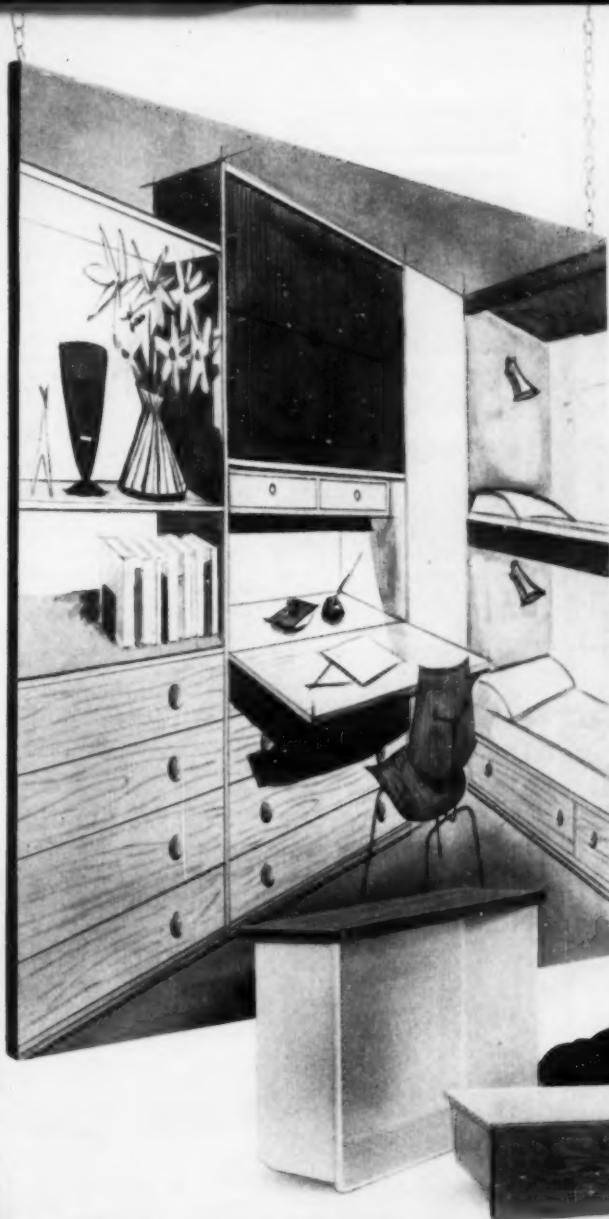
**Back to groupwork. Full daylight, instantly—no glare.**

REASON: Nothing to take down, nothing to tug back. No wasted money for multiple coverings, no wasted classroom minutes. Flexalum Audio-Visual Blinds do the whole job — taking you from projection darkness to full light (or anything in between) with just a flick of a nylon cord. The plastic lined side channels eliminate all noisy flutter!



**Get full-range light control—at low cost—with *Flexalum*® Audio-Visual Blinds!**  
Bridgeport Brass Co., Hunter Douglas Division, 30 Grand St., Bridgeport 2, Conn.





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Built-ins with Molded Drawers operate with the smooth trouble-free action found in the best case-goods. These styrene drawers never swell, warp, or stick. They're readily interchangeable. Molded in one piece, they have no seams or joints. The rounded corners and hard smooth surface reduce cleaning to a wipe of a damp cloth. No need for paper liners. Color is molded right through. Partitioning can be customized to fit the specific use. Drawer fronts can be matching wood or plastic surfaced. And Molded Drawers, unusually strong and durable, are pounds lighter.



LOOK FOR THIS LABEL — only on fine quality  
Molded Drawers made of Monsanto Lustrex® Styrene.

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Please send me free copy of "New Ideas for Built-Ins." Also  
sources for furniture featuring molded drawers.

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when you specify:  
**"BESELER, or EQUAL"...**



The Beseler  
**VU-LYTE II**  
 OPAQUE PROJECTOR

When your specification sheet for Opaque Projectors reads, "Beseler, or Equal" it can only mean Beseler Vu-Lyte II. We are proud that our name is used as a standard. But, we take even more pride in the fact that Beseler Vu-Lyte II Opaque Projectors have not been equalled, though often imitated.

**Here is the proof:**



1. **UNIVERSALLY ADJUSTABLE PLATEN.** Vacuumatic platen\* holds single sheets flat, without flutter — eliminating copy holders. Platen mechanism lowers parallel to desired copy plane. Holds steady in preset position without locking — no fear of snapping closed. The problem of annoying light leaks around the platen has been solved by the new Beseler Flashfield which attaches permanently in one minute and holds in every ray of light.



2. **PROJECTS ALL SUBJECTS.** Feed-O-Matic\* conveyor belt, crank-feeds continuous copy. Built-in drawer accepts glass plate for projection of books and glossy photographs. Large rear door for oversize specimens and easy access to projection lamp. Heat reflecting filter available for projection of temperature-sensitive materials.



3. **SPECIALLY DESIGNED LENS.** 5" diameter, 18" focal length f3.6 color-corrected, coated anastigmat for overall sharp image, with Double Rack and Pinion focusing. Permanently attached lens cap offers permanent lens protection.



4. **LIGHTWEIGHT, RUGGED CONSTRUCTION.** All wrought and riveted aluminum construction, contoured to hug optical path, for maximum compactness. Weight only 29 lbs., with two carrying positions. As an added convenience it has a permanently attached 15 ft. power cord with molded on right angle plug, and storage space provided in the projector.



5. **HIGH LUMINOSITY OPTICAL SYSTEM.** Delivers 140 lumens, for uniform projection even in lighted rooms. Secondary reflection system features unbreakable "Alzac" mirrors. Cooling system reduces heat to minimum. Virtually no fan noise!



6. **BUILT-IN PROJECTION POINTER.** Dust-proof Pointex produces bright, sharp arrow image that moves anywhere on screen. Optical system\* utilizes same lamp for protection and pointer — no extra lamps or external wiring.

\*Patent or Patent Applied For

There's only one way to get Beseler Quality on all features and to get these 6 advanced design "exclusives". When you order Opaque Projectors specify: "Beseler Vu-Lyte II — No Substitutes Accepted."



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3 gang lift-type model for Schools, Parks, Institutions, Industrial Plants. Cuts a full 7 foot swath. Lifts to cross curbs and for transport.



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## CARROM

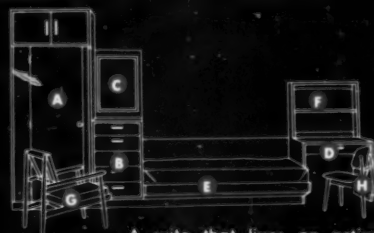
# College Career™ SUITE

### VERSATILE CONTEMPORARY GROUP CUTS COSTS

Complete flexibility and lower costs are combined with furniture-quality to create a practical, economical grouping for the modern college dormitory. All units (except chairs) may be "built-in" for financing at low rates, as part of building loan.

Complete living facilities on each wall eliminate cross traffic in two-student room. Units adapt to ANY plan.

Rugged beauty throughout! Northern Hard Birch, Formica tops, lock-pin construction at vital points, Carrom Enduro finish in seven wood tones.



A suite that lives an active life without showing wear and tear.

These coordinated units create an orderly, relaxing atmosphere for the student's college home.

Write Carrom "College Career"  
Planning Division for a plan to fit  
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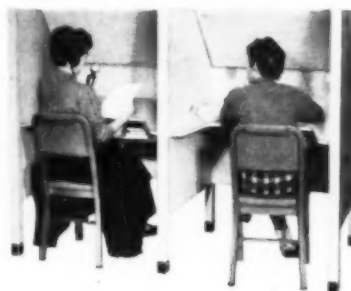




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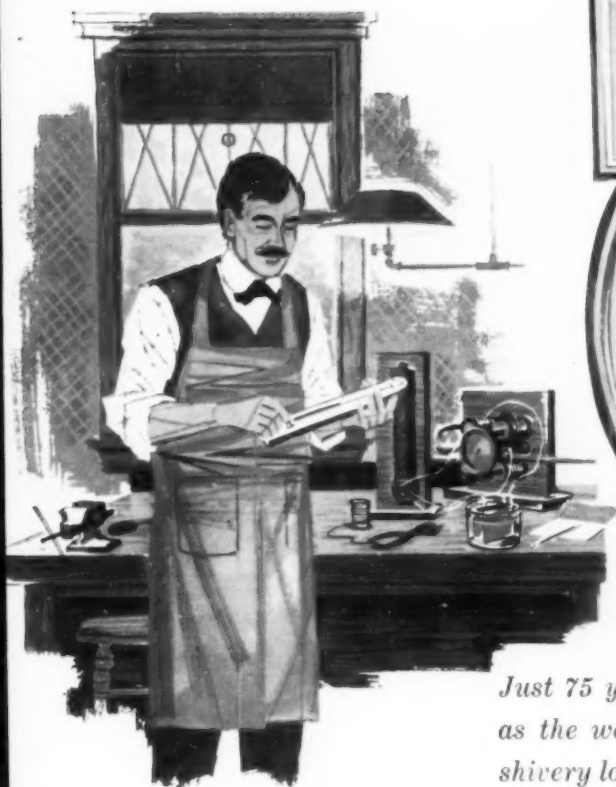
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*Just 75 years ago, heating was about as unpredictable as the weather, as temperatures alternated between shivery low and smother-high. Then a Wisconsin school-teacher named Johnson decided to do something about classroom comfort and thereby launched a new industry!*

## The Story of the Thermostat

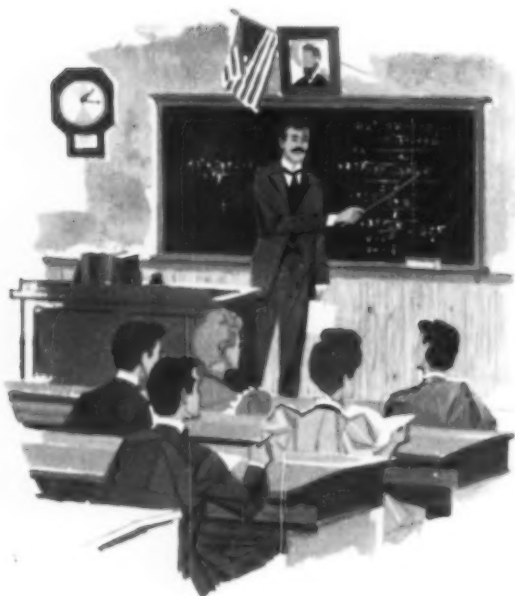
Actually this is the story of a symbol . . . the symbol of an industry that has brought comfort, safety, better health, and efficient working conditions to people all over the world.

. . . Every morning of the school year, millions of students sit down to study and learn in comfortably heated and ventilated or even air-conditioned classrooms. To help provide this ideal environment, the great majority of schools and colleges everywhere depend on precision pneumatic control systems.

. . . In a specially equipped manufacturing plant, delicate missile parts and components, with micro-inch tolerances, must be made under temperature and humidity conditions that never vary. At every step in their manufacture, modern pneumatic controls assure error-free regulation of the thermal environment.

. . . In a hospital, surgeons perform a lifesaving operation. Accurate pneumatic controls maintain the temperature and humidity at pre-selected levels to conserve the patient's strength during surgery.





... Far at sea, one of the nation's deadly new submarines cruises undetected, an elusive, power-laden sentry of the "Silent Service." Her crew lives and works in comfort and safety — in a climate precisely regulated by a pneumatic control system.

... Across the continent, pneumatic controls assure safe air conditions in the highly critical processing areas of an atomic energy facility. Pneumatic controllers of extreme sensitivity operate constantly to assure safe disposal of waste air and prevent the escape of contamination.

These are but a few examples of the ways in which modern pneumatic controls play a vital part in regulating the environment in which we live and work — helping to create made-to-order indoor climate for every purpose, controlling temperatures and humidities to a degree undreamed of when Professor Warren S. Johnson invented the first automatic temperature control system back in the 1880's.

### Inventor at Work

Though he was probably unaware of the fact at the time, Professor Johnson became the founder of the automatic temperature control industry when he devised a practical way to eliminate the problem of classroom temperatures that seemed to zigzag forever between shiver and swelter.

His first attempt at control — the "annunciator" system — merely called the janitor's attention to overheating, or lack of heat, by ringing a bell in the furnace room. The janitor would then open or close the classroom dampers, as required.

But this land-based version of a ship's telegraph soon gave way to an all-electric method, utilizing a thermostat in each room that would open and close the dampers automatically. And so, the first system of automatic heat regulation was born.

### The Electro-Pneumatic System

Intrigued with the possibilities of his long-awaited discoveries, Professor Johnson in 1883 left his post at Whitewater, Wisconsin, State College and came to Milwaukee to devote full time to refining and marketing the Johnson System.

His second major achievement, an electro-pneumatic control system, occurred almost at once. By successfully uniting the forces of *electricity*, for thermostat operation, and *compressed air*, for valve and damper operation, he developed a far more dependable and fully automatic control system. Finally he was ready to go out and revolutionize the comfort standards of the world. In 1885, he incorporated the business which today bears his name.

With branches established in Chicago, St. Louis, and New York, the Johnson thermostat on the wall soon became a familiar sight in the leading buildings of the day. Schools, prominent residences, and small business buildings were first to enjoy the comforts and economies of automatic control. They were followed closely by colleges, hospitals, public buildings, offices, stores, and industrial plants.





## From Mikado to Czar

Acceptance grew, markets widened. The fame of automatic controls traveled fast and far. Before 1890, the city of Berlin, Prussia, had written a report about the efficiency of its Johnson System. Later, the palace of the Mikado in Japan was equipped with Johnson Control. The King of Spain and other European royalty became Johnson customers. A special installation was made in the Kremlin in Moscow!

## Single Responsibility

Professor Johnson had the foresight to realize that the key to his success depended upon the *proper application* of his controls. Accordingly, he determined, from the outset, that his company should *never sell devices*, but should sell a *principle of control*. This meant that each system would have to be planned, manufactured, installed, and serviced by *Johnson* to meet the exact needs of the individual building.

Over the years, this policy of complete responsibility by a single specialized organization has insured owner satisfaction and saved untold millions of dollars for Johnson customers.

Carrying out this policy has also resulted in the closest possible working relationship between the Johnson organization and the nation's consulting engineers and architects, in a joint effort to provide ever better control of thermal conditions.

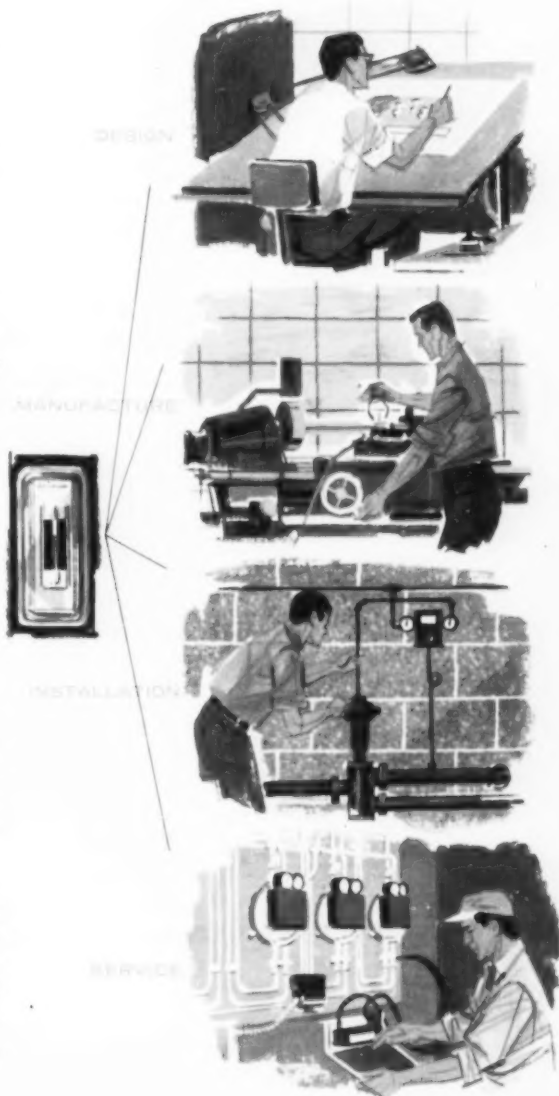
## Many Johnson "Firsts"

The history of the thermostat and the Johnson Service Company coincides with the period when other pioneers were busy introducing innovations in heating, cooling, and ventilating methods and in developing full-scale air conditioning. Working closely with the research staffs of these manufacturers, Johnson engineers were able to supply the most effective controls for every new development in basic equipment. This cooperation has continued and flourished to the present.

Over the years, the Johnson Service Company has been the source of a never-ending flow of new ideas, which have included virtually all of the key developments in the field of automatic temperature control!

By far the most important was the all-pneumatic control system, perfected in the 1890's and still the standard everywhere. Others include the all-metal thermostat, the famous *Dual* or day-night thermostat, the heating-cooling thermostat, summer-winter thermostats, the airstream thermostat, master-submaster thermostats, supersensitive gradual-acting thermostats, and powerful piston damper operators.

Another famous development was the Humidostat or humidity regulator. And, of course, the Comfostat, an exclusive Johnson instrument that controls room temperatures in relation to humidity conditions. The popular pneumatic control center, for centralized supervision and control of modern air-conditioning systems, also was first perfected by Johnson.







## Uninterrupted Progress

As the concept of controlled environment gathered momentum, so did Johnson. Important "firsts" became routine jobs, as the industry looked to Johnson for the answers to new control problems. From the simple comfort needs of the buildings of the 80's and 90's, to the history-making demands of the first scientifically air-conditioned building, down to the most complex requirements of today's commercial and industrial buildings, Johnson has been the leader in the pneumatic temperature control field.

Today, no matter where you go, you'll find the important buildings are equipped with Johnson Control. From the fabulous Fontainebleau Hotel to the mammoth Merchandise Mart to the famous UN Secretariat Building . . . in hospitals, in sprawling defense plants, in research laboratories, in vital military installations, in shopping centers, in buildings of every size and type and in ships at sea . . . there are temperature and air-conditioning control systems by Johnson.

Johnson's work in the school field is especially noteworthy. Since the invention of the first schoolhouse control system over 75 years ago, Johnson has helped plan and has installed control systems in more school buildings than the rest of the industry combined!

## Johnson Today . . . and Tomorrow

To make certain that each installation performs up to expectations, Johnson backs its engineers with the most complete line of pneumatic temperature, humidity, and pressure control equipment in the industry.

To serve you most efficiently both before and *after* a sale, Johnson maintains the largest and most experienced field organization in the industry, with 107 completely staffed branch offices in the United States and Canada, plus full-time, factory-trained installation and service mechanics in over 200 other cities.

This is by no means the end of the story of the thermostat. For against this unmatched background of innovation, experience, and service, Johnson's never-ending search for new and better controls will inevitably lead to dramatic new ideas in the years ahead. As the day of completely air-conditioned cities approaches and as new and unprecedented demands for precision controls evolve, the forward-thinking Johnson organization will always be ready with the right answers.

The Johnson research and development staff and facilities have been expanded three times in the past four years. And final plans for the next major expansion are already underway! In the future then, as in the past, you can continue to look to Johnson for the world's finest controls!

Johnson Service Company, Milwaukee 1, Wisconsin. In Canada: Johnson Controls Ltd., Toronto 16, Ontario.



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# Advice on Remodeling the College Store

**RUSSELL REYNOLDS**

General Manager, National Association of College Stores  
Oberlin, Ohio



**E**VERY college and university deserves an adequate college store. Originally the store was established to provide the necessary books and supplies, but a modern outlet has become a vital cog in the local distribution system serving students.

Many stores are giving *the complete book service*, with the result that college stores are rapidly becoming the largest single segment of the dollar volume of all books sold through retail channels. Paperbacks have proved to be ideal sales items. No store planned before 1957 has enough space for the display of paperback books. Most modern stores provide room for from 4000 to 6000 titles. The book-centered store on the book-centered campus has become a reality.

Book merchandising in the college market is different from book merchandising in the general book field. College stores are successful in the book business when they follow the unique patterns of the student interest. "Ye Old Book Shoppe" approach has failed repeatedly in the college market. Successful stores follow the patterns indicated by student interests in the books they are required to purchase.

While thrilling examples of stores doing virtually no nonrequired book business can be told, the improvement of the established college store general book departments has been just as marked. The impact of self-service technics on college store book departments has resulted in large percentage increases in the sale of all books. Ease of acquisition even increases the sales of textbooks within a given number of student customers.

Two-thirds of all college students are now served by self-service stores.

Materials bearing the school seal and colors are important in promoting and publicizing every college. In making this material available to students, alumni and friends of the university, the college store serves an important public relations function. This function is not only frequently overlooked but occasionally criticized as an unnecessary part of college life.

It is not possible for many students to win a varsity or squad letter, but all can feel school pride in the possession of book covers, pennants, decals, dishes and glassware. Loyalty to the college is advertised by ownership of school insignia souvenirs; these items not only cost the college nothing — but are a source of profit to

the college store and to the university itself. Materials bearing the school name are a most unique means of public relations.

Colorful insignia items offer an attractive background for the college store. While the remodeling plans of almost every college store has sufficient space for books to promote *the complete book service*, these plans also should provide adequate space for other materials that promote the school name and that add to the profit dollar necessary to maintain education at a high level.

Management is of vital importance. Since the store is one of the few operations on the campus that can be checked by an operating statement, the value of management easily can be determined in dollars and cents. Poor management is reflected in lost profits and service. Good management does not cost anything; it results in better service to the college community and more income to the school.

One of the real tragedies is to see college administrations hire management totally without retailing experience to operate even million dollar volume stores. Inexperienced managers in either large or small stores are the biggest problem.

Remodeling plans should include sufficient space for open display so that the customer can examine all items. Remodeled stores find their sales of books and all merchandise soar far beyond expectations when modern merchandising methods are used. College stores are being remodeled because the dollars produced justify the investment.

When planning major modernization, we recommend use of a store designer before the building is under construction. It is unusual to find an architect who knows much about store layout. Designers assert that most major errors have been made before their services are retained.

Many schools are constructing separate buildings for their stores because providing sufficient space in existing or contemplated buildings is much more expensive.

College and university business management should insist on certain standards of performance. The store should be profitable, returning from 4 to 6 per cent on the gross sales, and an even larger amount on invested capital. There is the interest on a million dollar endowment to be found in the profits from your store.



# LOOKING FORWARD

## Timely Leadership

THE recently announced resignation of Lawrence A. Kimpton as chancellor of the University of Chicago is significant because of the success of his administration. Listen to Dr. Kimpton:

"Why, then, do I want to resign? My conviction is that the head of such a university as this one can do his best work for it within a reasonably short time. The university ever so often requires a change in leaders who can apply fresh and sharply objective appraisals, and start anew, free of the associations, friendships and scars of a common struggle.

"I believe that the history of our university bears me out in showing the renewed vitality and intensity which came with each of my predecessors and the new and distinctive contributions they were able to make through the direction they gave the university.

"This is the more understandable — and this is not a complaint — when I remind you that the job is an enormously demanding and exhausting one.

"Finally, I can only say that, were I not confident you could find someone who could do the job from here on better than I could do it, I would not resign."

One cannot help but applaud Chancellor Kimpton's objectivity and candor. He has made it plain that he has no intention of becoming head of another university. "I could not develop the enthusiasm and devotion to any other institution which I have for the University of Chicago," he said.

The record of Chancellor Kimpton's achievements is substantial. The university was faced with encroaching blight, and "if the university was to exist, that threat had to be removed. It has been removed, and we now have assistance of a stable community in which the university will have the environment essential to its life and activities." This community effort, with Dr. Kimpton as president of the South East Chicago Commission, was one of the first of its kind in the nation and has represented a total projected cost of \$134,804,607 for slum clearance and urban redevelopment.

During Dr. Kimpton's nine-year administration as chancellor, the university has received \$100 million in contributions, has increased median faculty salaries approximately 30 per cent for all full-time faculty members, and has completed or has under construction 15 major buildings and is remodeling others for a total expenditure of \$42 million. New additions to endowment are \$29.5 mil-

lion exclusive of capital gains on endowment and of market appreciation of endowment investments.

The Kimpton resignation is unique in that an eminently successful administrator is convinced that an institution can make even greater strides under different administrative leadership. Not many executives have admitted or would admit the desirability of their own replacement in order to advance the program and fortunes of a college or university.

## Economics of Higher Education

A SIGNIFICANT book on the financing of higher education has just come off the press: "Financing Higher Education; 1960-1970," published by the McGraw-Hill Book Company.

An estimate of its scholarly stature can be made by listing its contributing authors: Robert D. Calkins, Harold F. Clark, Philip H. Coombs, Raymond Ewell, Clifford C. Furnas, Seymour E. Harris, Harlow J. Heneman, John D. Millet, Gordon N. Ray, Willard L. Thorp, Sidney G. Tickton, and W. Homer Turner. This Who's Who of academic, foundation and corporate leadership has presented points of view on financing higher education that merit careful analysis.

Eleven subjects, many of which are controversial in nature, are covered under the chapter headings: an economist's overview, broad issues in financing, the role of research, conflict and cooperation, opportunities for better institutional management, long-range planning, the role of student changes, the role of government support, the role of private support, outside the conventional structure, and probabilities and possibilities.

These chapters, each written by an authority in his field, suggest a homework assignment that no responsible college or university executive can afford to ignore. It is not expected that any reader will agree in toto with the hypotheses advanced by such a wide variety of authors. It is to be hoped, however, that the careful student and practitioner of administration will find it to his advantage to be conversant with the proposals and solutions suggested.

One hazard faced by any college or university administrator dealing with fiscal matters is that he may become provincial in his approach. This new book should aid such an individual in making a broad gauge approach to problems of finance and in that manner make him a more effective institutional executive.



**ANTIOCH** journalism student is shown on the job at the *Toledo Blade*. Antioch College students alternate periods of attendance in class with work in their specialized fields.



## ***They Dared To Be Different***

***The story of six American colleges***

**VICTOR J. DANILOV**

Director of University Relations  
University of Colorado, Boulder

**O**NE of the principal characteristics of American higher education is diversity. There are some 1350 four-year colleges and universities in the nation, and no two are alike.

Yet, there are six colleges so different in their educational philosophies that they easily might be classified as America's most unusual colleges. The six are unique because they dared to be different, and stuck to their guns. They rejected collegiate conformity, not merely to be different, but as a means of more adequately meeting the needs of their students.

The six institutions are not particularly large, especially wealthy, or extremely well known. They are, basically, varying shades of liberal arts colleges, interested only in producing a better project.

The six colleges are: Antioch College, Yellow Springs, Ohio; Bennington College, Bennington, Vt.; Blackburn College, Carlinville, Ill.; Sarah

Lawrence College, Bronxville, N. Y.; St. John's College, Annapolis, Md., and the Associated Colleges at Claremont, Claremont, Calif.

Of the six, three are unusual because of their unique work-study programs. Antioch College students are required to alternate attendance in class with periods on the job. Bennington College closes down for 10 weeks in the winter while the entire student body goes off campus for practical experience. Blackburn College requires all of its students to work their way through college.

Sarah Lawrence College is different from the average institution in a number of ways — it has eliminated required courses, traditional lectures, and conventional examinations and grades, and has placed greater responsibility on the individual student for her own education.

The academic program at St. John's College also has no parallel. The cur-





**AT BENNINGTON COLLEGE** (top) informality and small classes are two chief characteristics. Students obtain on-the-job experience during a 10 week winter term.



**BLACKBURN COLLEGE** (bottom) student at work in college kitchen. Every student at Blackburn is required to hold down a part-time job averaging 15 hours a week.

riculum is based largely on the "great books" idea, with all students taking the same four-year program; there are no electives. Faculty members must be as liberally educated as their students, since, sooner or later, they must be able to teach everything — languages, music, science, literature and so forth.

The sixth "institution," the Associated Colleges at Claremont, actually is five colleges — Claremont, Claremont Men's, Harvey Mudd, Pomona and Scripps. These colleges, all located in the same community, share certain facilities and permit students to take courses at any of the institutions on a reciprocal basis.

The Antioch cooperative plan, started in 1921, attempts to add a new dimension to learning. It is designed to enable students to discover their vocational interests, to introduce students to the basic principles and skills in their respective fields, and to expose them to living and working conditions in various environments.

The late Charles F. Kettering, noted inventor and engineer, paid tribute to the Antioch idea when he said: "Education consists of what you learn from books and what you learn from practical living, but usually the two learnings simply follow one after the other, end on end. At Antioch, the two overlap and both gain strength."

Under the Antioch work-study plan, every student is required to spend about half of his or her college career working full time on jobs related to his or her field of study. A student usually alternates school terms with another student in holding down a job. In return, a student receives college credit and regular pay for his or her work. It generally takes five years to complete the program, although it is possible in four. During that time, a student usually receives experience in from four to six different jobs.

Antioch students are likely to be found working for almost any company and in any job. They have conducted sea water research, worked for news services, served on hospital staffs, assisted congressmen, and performed a wide variety of other func-



## **All six colleges are attempting to provide new dimensions in learning**

tions. By graduation, the students ordinarily are two years ahead in their careers, and are eagerly hired by employers who are willing to start them higher on the ladder.

The Bennington College work-study program differs from the Antioch plan in several basic ways, the most important being the purpose of the program and the fact that the on-the-job experience is confined to a 10 week nonresident term in the winter.

Bennington was founded in 1932 in an attempt to provide a new type of education for women. It departed from traditional educational methods, incorporated the visual and performing arts as part of the liberal arts program, and emphasized independent thinking and practical experience. The college gives students both greater freedom and greater responsibility for their own education than is customary. It sets the standards for student performance, but at the same time it acknowledges various ways of meeting these standards.

Each student's program is individually planned. No two students necessarily follow the same set of courses, nor do they necessarily proceed at the same pace. The basic aim is "the education of intellectually and emotionally mature young women, capable of independent thinking, who will be prepared to educate themselves throughout their adult lives and to participate constructively and responsibly in the affairs of modern society."

External disciplines, such as compulsory courses, competitive grades, formal examinations, the numerical accumulation of credits, and other mechanical devices, are avoided as interfering seriously with real incentives and active learning.

On the other hand, there is emphasis on direct experience as a normal means of giving new dimensions to learning. As a result, greater attention is given to discussion, the use of source materials, individual projects, small seminars, tutorials, and nonresident assignments.

Nonresident assignments are handled during the 10 week winter term, during which time the college is closed

down. Students work in factories, stores, hospitals, offices, schools, laboratories and various government and social agencies during the term. The intent is to add to their self-confidence and maturity and to broaden their view of the practical world, and not necessarily to provide experience in a particular field of study.

Blackburn College offers a third approach to work-study programs, the primary purposes being to help students work their way through college and to keep college costs at a minimum by utilizing student labor. Every student is required to hold down a part-time job averaging 15 hours a week. The students cook, serve food, haul garbage, do the laundry, work in offices, maintain the campus grounds, and even construct buildings. The student body provided all the labor for a \$500,000 science building, completed in 1957 at about half what it would have cost using professional labor.

The Blackburn plan is the brainchild of Dr. William M. Hudson, a Presbyterian minister and president of the college from 1912 to 1945. He conceived the work-study plan in 1913 to assist impoverished students and to rescue the institution from financial collapse.

### **No Social Barriers**

In addition to providing financial aid for the student and the college, the Blackburn work-study program has one other major benefit — it creates a climate in which there are no social barriers and working bears no stigma.

At Sarah Lawrence College the emphasis is on creative thinking and personal development, rather than on financial aid and appreciation for a hard day's work. It was founded as a liberal arts women's college in 1928, with an experimental curriculum designed to stimulate and develop the particular talents and interests of the individual student.

The institution's broad program is based on the following three beliefs:

1. Recognition of individual differences is just as important as the dis-

semination of knowledge and the development of various qualities.

2. Learning is not only the acquisition of knowledge, but also the active use of knowledge.

3. The total life experience of students while they are in college is part of their education.

With such an educational philosophy, Sarah Lawrence College has pioneered in eliminating required courses, in broadening the liberal arts curriculum, in substituting independent studies and faculty conferences for traditional lectures, in replacing conventional examinations and grades, and in encouraging active participation in the life of the college, both inside and outside the classroom.

Other features of the system are close faculty-student relationships, individual program planning, small classes, field trips, emphasis on the creative arts, fewer but more demanding courses, self-government, self-appraisal and self-expression.

### **Classes Limited to 10 or 12**

Each student takes only three courses a semester, receiving five credits for each. Most classes are limited to 10 or 12 students, and usually are conducted as discussion groups. Classes meet once a week for an hour and a half or twice a week for an hour. In addition, students have regularly scheduled conferences with the instructor of each course. These conferences are held weekly or biweekly, and involve class work and independent studies.

Progress is judged not only by how much is learned about a subject, but how much responsibility students are able to take in planning their work, carrying it through without frequent class meetings, studying independently in the library, laboratory or studio, and presenting the results both in conference and in class. The ultimate aim of each student's program is to help the student find and express herself, and to use the knowledge she acquires in an active, constructive manner.

The educational philosophy of St. John's College is virtually the reverse





**SARAH LAWRENCE COLLEGE** puts the emphasis on personal attention and self-expression. This is typified in this art instruction photograph.



**ST. JOHN'S COLLEGE** curriculum is based on the study of the great books and of documents that form the foundation of the philosophic, literary and scientific tradition of our civilization.

of that of Sarah Lawrence College. There is no provision for the tailoring of programs to the talents and interests of the students. Rigidity replaces flexibility and specialization as all students are required to take the same courses.

#### **Study the Great Books**

St. John's curriculum is based on the continuous study of the great books and significant documents that form the foundation of the philosophic, literary and scientific tradition of our civilization. This work is supplemented by a four-year required course in mathematics (which includes astronomy and theoretical physics), a four-year course in language (covering English, French, German and Greek), and a four-year laboratory course (in which students perform experiments in physics, chemistry and biology).

In addition to this basic program, there are weekly lectures on subjects related to the over-all offerings and tutorial instruction in the elements of music during the freshman and sophomore years.

St. John's College was founded in 1696, but it was not until 1937 that the present mandatory program was

adopted. Two members of a University of Chicago team trying to evolve a modern equivalent of the traditional liberal arts curriculum were handed the job of reworking the college's academic program. Stringfellow Barr was named president and Scott Buchanan was appointed dean.

They installed a four-year required program with no electives. It was centered on some 100 of the greatest books, covering 2000 years of Western thought from the Greeks to Darwin and Freud. Today, the same books are the core of the institution's program.

St. John's College lists three objectives for its strong liberal arts curriculum.

1. To pass on knowledge of the Western tradition.
2. To develop and free the mind under the discipline and enlightenment of this knowledge so it can be used as a tool of reason rather than prejudice.
3. To develop understanding or a philosophy of life by persistent questioning and discussion of the basic problems that face all men at all times.

No attempt is made to prepare students for specific vocations. There are no "majors" and no departments. St.

John's, in fact, requires its faculty to be as liberally educated as its students. No matter what his specialty, every instructor must sooner or later learn and teach everything — mathematics, languages, sciences, music, and the great books seminars.

The Associated Colleges at Claremont resulted from an attempt to combine the special qualities of the small residential college with the wider facilities and scope of the university.

#### **Pomona Faces Decision**

In 1925 Pomona College was faced with the decision of increasing its size or turning away hundreds of students. Pomona's governing board decided to remain a small college of distinctive character, but, at the same time, President James A. Blaisdell suggested that additional colleges be developed in Claremont. Accordingly, Claremont College was founded in 1925, Scripps College in 1926, Claremont Men's College in 1947, and Harvey Mudd College in 1955. All are located on adjoining land.

These colleges worked out a unique cooperative arrangement through which they all remained independent, with their own educational emphasis,





**ASSOCIATED COLLEGES OF CLAREMONT**, five in number, share use of student union at Claremont Men's College.

student bodies, faculty, administration, buildings and governing boards; at the same time, they made it possible to share certain common facilities and for the students to take courses at other institutions at no extra cost.

The plan sought to combine the advantages of smallness and bigness, as is done in the great English universities, by fostering the personal relations of the student to a small faculty and student body, and by providing the broader privileges of lectures, books and equipment in a university environment.

In the years that have followed, the Claremont plan has worked out beautifully. The colleges have multiplied their educational resources tenfold during the last three decades. A graduate school has been founded as part of Claremont College, and extensive auditorium, library, museum, laboratory, athletic and health facilities have been provided.

The undergraduate colleges are committed to broad basic learning in the liberal arts and sciences, while the graduate school is concerned with advanced studies in the humanities, social sciences, fine arts, education, and selected areas of science.

The programs at Antioch, Bennington, Blackburn, Sarah Lawrence, St. John's and the Associated Colleges at Claremont are among the most unique in the nation, but they are not the only experimental or dynamic programs in higher education.

Chapman College in Orange, Calif., for example, has been experimenting with a single-subject study plan since 1945. Under the program, students take only one major course in each of three six-week sessions during a semester. The plan, however, was replaced with the conventional multiple course, semester system, starting with the 1959-60 academic year. It is being abandoned because of the difficulties of new students and faculty members in adjusting to the program.

#### **New Experiment in New England**

While this experiment is being dropped, another is getting a start in New England. Four institutions of higher education — Amherst College, Mount Holyoke College, Smith College, and the University of Massachusetts — are pooling their resources to form a new liberal arts college. A joint committee, representing the four institutions and supported by the Fund for the Ad-

vancement of Education, proposed the establishment of a college that would break sharply with many practices in higher education.

The committee suggested that the new college be governed by the faculty senate rather than by a board of trustees, that the number of courses be limited to a few basic offerings, that students be permitted to take only three courses a semester, that greater emphasis be placed on the student for his own education, and that the academic program be organized into three divisions: humanities, social sciences, and science.

The committee also recommended that there be no fraternities or sororities, no highly organized intercollegiate athletic program, no required physical education courses, and no departments of instruction.

The plan is described as a fresh approach to American higher education. The four sponsoring institutions see the experiment as a possible solution to the spiraling college population and to the various problem areas in the academic scene. If the plan progresses as expected, it is very likely that the list of unique colleges will have to be expanded to include the new college in beautiful Connecticut Valley. ■



**FACULTY** members of Union College shown relaxing between sessions at a September retreat.



## PROJECTING FACULTY NEEDS

**A method for arriving at a logical and  
fair ratio of academic personnel to  
students for a year, five years, a decade**

### **EDWARD EIKMAN**

Associate Director, Office of Institutional Research and Service  
Florida State University, Tallahassee

**P**ART of the work of an office for institutional research and service may be to furnish the board, the president, the deans, legislative bodies, and/or other officers with data concerning the number of faculty members that will be needed for a particular term or perhaps for a particular year. Sometimes faculty needs may be projected for as long as a five-year period. Such items as university policies, the number of students to be served per teacher, the funds available, and the like are factors that enter into the projections. These factors serve to limit the total number of students that may be served and, consequently, the size of the faculty. Institutional policy re-

garding the amount of research that will be carried on and the extent of extension services the institution will offer also must be considered.

In projecting the number of faculty needed the first consideration should be the number of students to be served. In Florida the Council for the Study of Higher Education has recommended the following teacher/student ratios:

*Lower level courses* (freshmen and sophomores), one teacher for each 24 students; *upper level courses* (juniors and seniors), one teacher for each 16 students; *graduate level courses*, one teacher for each 10 students; *all levels*, one teacher for each 20 students.

According to the published studies of the Council, the students served per teacher may be adjusted down approximately five students in each level and still maintain efficient usage of the faculty for effective teaching.

To report the total number of students served, the semester hours produced may be converted to "full-time equivalent students." A full-time student may be variously defined; in Florida State University he is defined as a student who registers for 15 semester hours of credit in the undergraduate division, or one who registers for 12 hours credit in the graduate division. Thus we may start with semester hours produced in the past semester and convert these data



# ESTIMATE OF NUMBER OF STUDENTS TO BE SERVED AND PROJECTION OF FACULTY NEEDED, 1960-61

	Arts and Sciences	Business	Education	Music	Total
1. Estimate of number of students to be served (increase of more than 10% over last year) and distributed as indicated	1250	250	275	225	2000 F.T.E.
2. According to teacher-student ratios maintained in these schools in past, these teachers will be needed	50	10	18	22	100
3. Add number of administrators needed	4	2	3	1	10
4. Add number of persons for research and extension services	4	1	4	1	10
<b>TOTAL FACULTY</b>	<b>58</b>	<b>13</b>	<b>25</b>	<b>24</b>	<b>120</b>

to the number of F.T.E. students served. We may base future projections upon the number served during the past semester or academic year, or the latest semester or academic year for which data are available. Projections may be made to show the number of teachers used in the past and needed in the future in each level of instruction, or data may be averaged and projections made for the total number of students regardless of level.

## Based on Number Taught

Analysis of enrollments to determine the number of full-time students served should be made at the end of the "add and drop" period, which is usually at the end of the second week after the beginning of a semester. Enrollments to determine faculty needed should be based upon the *gross number of F.T.E. students taught*, regardless of whether non-passing grades are earned by some. That is, the college or university must prepare for the *gross number of F.T.E. students to be served*.

Let us assume that the conversion of semester hours produced in the past shows that we served 1800 full-time equivalent students and that our studies of growth in the academic departments, of increases in the number of graduating high school seniors, of our share of the graduating high school seniors, of the normal growth of our graduate division, and other

indicators show our increase in enrollment for the next year to be slightly more than 10 per cent — that we may expect 2000 students. Let us assume that we will use the teacher-student ratios prescribed earlier and that our teacher-student ratio for all levels in the past has been one teacher for each 20 students. Let us assume, too, that this ratio is acceptable to the administration and that we will continue to use this ratio in the future.

Then, if we expect 2000 students we will need 100 teachers for the *teaching function*. If the equivalent of 10 administrators and 10 people for research and services to the public also is needed, the total faculty needed will be 120. As the number of students may increase in the future and as university policy dictates more activity in research or in services to the public, the number of faculty members must be increased correspondingly. By use of the technics described, projections may be made for several years in the future.

## Work Sheet Helpful

To illustrate the theory involved in making projections, the work sheet shown above may be used.

In the illustrated analysis it will be noted that although the overall teacher-student ratio for the *teaching function* is one teacher for each 20 students, within the four respective schools the ratios are: *arts and*

*sciences*, one teacher for each 25 students; *business*, one teacher for each 25 students; *education*, one teacher for each 15 students; *music*, one teacher for each 10 students.

## Wide Differences in Schools

The reasons for wide differences in the teacher-student ratios in the different schools are easily recognized. Arts and sciences includes departments that organize classes with 100 to 200 students. However, many classes, such as advanced sections in chemistry and physics, have small enrollments. Yet ordinarily the School of Arts and Sciences will have a high teacher-student ratio when all departments are averaged. Business is also a school that can teach students in large sections by the lecture method. The School of Education offers much graduate instruction; at this level classes are of limited enrollment and the instructor must do considerable work with individual students. In music there is much individual instruction and, consequently, a ratio of one teacher for each 10 students is acceptable.

In summary, institutions will need to plan carefully to use their faculty to the best advantage. Institutional policies, financial resources, and the work of each institution in teaching, research and extension services must be evaluated to determine a logical and fair apportionment of academic personnel. ■



# VIEWBOOKS: A NEW DIMENSION

**ROWAN A. WAKEFIELD**

Director of Public Relations  
Union College, Schenectady, N.Y.

COMMENTS such as the following have convinced us that the time, effort and money spent in publishing a Union College viewbook last year were definitely worth while:

"Your College . . . Your Future," which I have read with the greatest of interest . . . is indeed a real contribution to the advancement of the understanding of higher education: . . . — John F. Brosnan, chancellor, board of regents, state of New York.

I think the viewbook is splendid, both from the point of view of content and manner of presentation. It was especially pleasing to me to note that it dealt largely with that which is the ultimate foundation of any college — its people. We all have a strong and continuing reason to be proud of our college — and your publication elegantly tells why.—Alumnus, class of 1946 (Conn.).

Thank you for the very impressive and excellent viewbook, "Your College . . . Your Future." This is one of the most outstanding college publications that has come to my desk in some 14 years of college counseling . . . .

We are quite excited about our school's name being embossed on the cover. This is a unique idea and it has already attracted the attention of college-conscious students. — Director of Guidance (Pa.).

Just what did we expect of this viewbook when we began planning it the previous summer?

For prospective students, parents and guidance counselors, the admis-

sions office had long felt the need of a viewbook — a photographic interpretation of the college that would complement our comprehensive but somewhat cut-and-dried catalog.

Equally important was the need to bring our 10,000 alumni up to date with the progress of the college, and thus increase their pride in Union and their willingness to support it. A viewbook that would accomplish this could also serve to increase the understanding of the college by the faculty, by the undergraduates, by friends, or, for that matter, by anyone who read it.

This involved a departure from the conventional viewbook, and a challenge to capture as much as possible of the elusive and distinctly unique spirit of the college. Part of the solution, I believed, was to give the reader a person-to-person acquaintance with Union College as a place where boys become men, where they study, learn and live for four years. Such a time consuming and relatively costly project could be justified, I felt, only if it were to serve more than just Union College's interests. It must have a broader *raison d'être*, such as helping meet the widespread and

**STUDENTS.** In an interdepartmental seminar in sociology and engineering they are acquiring a liberal education.





urgent need for a better understanding of higher education.

### **A New Approach**

Because the conventional viewbook did not adapt itself to this approach, we decided to break down the total four-year college experience of students into *major areas of influence*, then portray college as a set of influences. This would attain our broad objective while telling the story of Union College meaningfully for prospective students and bringing alumni up to date.

Actually determining the major influences or potential sources of influence of college upon the individual proved to be a difficult task. Collection of the raw material involved:

1. A survey of our alumni, trustees, faculty, staff and undergraduates.

2. A study of the results of an admissions office survey of subfreshmen conducted to determine what they wanted in literature from the college.

3. A review of such widely diversified books and studies as the Rockefeller Report and Edward D. Eddy Jr.'s "The College Influence on Student Character."

4. A major study of publications from other colleges.

5. My own recollections of college and more recent experience in secondary school administration.

As this raw material was gathered during the course of the year, it was studied, tabulated, filed and eventually reduced to the following main sections into which the viewbook is divided: (1) students; (2) faculty; (3) curriculum; (4) independent study and creative effort; (5) extra-curricular activities; (6) athletics; (7) scholarships and financial aid; (8) cultural and social atmosphere; (9) fraternities; (10) environment; (11) job and graduate school placement; (12) alumni; (13) college history and traditions.

### **Telling the Story**

Having divided the field into these basic areas of influence, the next step was to elaborate upon them in the form of brief introductions to the 13



**FACULTY.** Some of the staff members serve as counselors, ensuring every student an adequate opportunity to discuss his problems. Freshmen elect their own advisers. Conferences are in a relaxed setting.





**CURRICULUM.** Student in government class measures effectiveness of a political campaign in Schenectady.



**INDEPENDENT STUDY.** Students are inspired to develop their individual capabilities as fully as is possible.

sections of the viewbook itself. The opening section on students, for example, reads:

"Daily contacts with fellow students, the ideas they express, the examples they set — these are things which influence a student's life long after he leaves college. The ideal college environment offers associations with people from many different backgrounds, people with widely varied interests in life, and, above all, people with active minds and fresh ideas."

This, in turn, introduces four pages of informal student portraits — a cross section of our undergraduates, showing their backgrounds, college interests, and postcollege plans.

It is important to note that *all* of the written copy, both introductory statements and captions, was prepared *before* actual photographs were chosen to illustrate ideas, rather than ideas being merely fitted to pretty pictures. For example, this is the introduction to the scholarship and financial aid section:

"Rapidly rising living and educational costs have made scholarships and other forms of financial aid more

important than ever before. For many students, such assistance means the difference between going to college or not going at all; for others, it means at least partial relief from financial worries and more spare time for participation in campus activities. About half of Union's students receive some form of financial assistance."

#### **Required Elaboration**

This required the following elaboration: (1) an explanation of sources of scholarship funds; (2) a word on the growing acceptance of student loans, repayable after graduation when earning power is appreciably higher; (3) a description of our student employment bureau, which places many students in part-time or odd jobs throughout the community, and (4) mention of our grant-in-aid program, which provides part-time work in college offices for a limited number of deserving students.

Once all the copy was prepared, the final draft went to Irving Mickey, director of the news bureau, for checking and rewriting, and on to the president, the dean, the admis-

sions office, and the faculty division chairmen. Recommended revisions were cleared back through Mr. Mickey for final editing.

A copy of the draft captions served as the outline for the selection of the photographs. Section by section, the captions were checked against our already extensive collection, which supplied us with about half of the 170 photographs needed. The remainder were taken expressly for the viewbook. In the section on scholarships and financial aid, an existing picture of a student with a part-time job in a local newspaper office was used to illustrate the role of the student employment bureau. Photographs were taken expressly to illustrate loan and grant-in-aid programs, while to portray the sources of scholarships we used a graph. In all cases where pictures had to be taken, I briefed the photographer in detail.

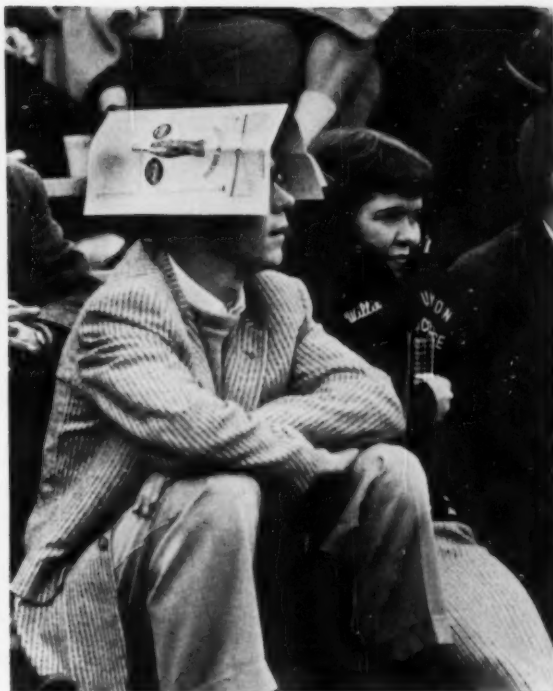
#### **Final Stages**

Completed copy and pictures went to a commercial artist in the employ of the publishers of the book. Previously he had worked up the cover design and page layout samples, and





**EXTRACURRICULAR.** Activities prepare the student for the competition and cooperation that society demands.



**ATHLETICS.** It offers thrills for student spectators, as well as a balance between studies and the sports program.

we had agreed on a general style to be followed in laying out the book.

At page proof stage, the book, together with my statement of editorial philosophy, was given to Dr. Carl Niemeyer, professor of English and chairman of Union's division of humanities, who wrote the preface. His work succeeded admirably in setting the tone. It was at this stage that we finally agreed on our title — "Your College . . . Your Future."

#### **Distribution**

In view of the expense and tremendous effort that went into publishing the viewbook, we planned its distribution with care. In almost all cases a printed note from the president, the alumni director, the admissions director, or me explaining the philosophy behind its publication accompanied the booklet in the mails.

Copies went to the faculty, alumni and trustees, to many undergraduates, to all secondary schools on the admissions office mailing list, to an extensive list of foundations, American business leaders and educators, to virtually all of the leading educational editors and writers, to the U.S. In-

formation Agency and to U.S. embassies and consulates abroad, and to the leading libraries of the nation.

We also sent copies to certain magazine editors and book publishers, offering them any of the photographs and/or copy that they believed might be used to further the cause of higher education. In addition, we had a number of copies of the viewbook hardbound and sent to secondary schools with their names printed on the covers.

#### **Cost of the Viewbook**

Exclusive of photography, the cost of the publishing of the viewbook came to about 25¢ a copy (\$6270 for 25,000 copies). It was printed offset, two colors on the cover and one for the text, as an issue of our quarterly *Bulletin* series to take advantage of the economy of our second class mailing permit.

The prints of photographs used from our files cost approximately \$100. The remainder, taken primarily for the viewbook, came to around \$1500. We justified this expense largely by our long standing need for a file of good photographs of col-

lege facilities and the various aspects of college life.

#### **Evaluation**

In my mind there is no question but that "Your College . . . Your Future" is a success. Our admissions office, in particular, is completely sold on it. The reaction of schools, of prospective students, parents, faculty and trustees has been universally enthusiastic. A case in point is an alumnus who for years had been trying to interest his son in Union with no success. The day the viewbook came, the son met his father at the door, viewbook in hand, begging him to take him for a visit to the college.

The viewbook's contribution to the understanding of higher education has been widespread. Many readers have gained added insight into both the values and problems of higher education, whether they read it with this in mind or merely because of their interest in Union.

Indirectly, the impact of the viewbook is being felt through a variety of our public relations office activities. In initially determining the influences of college, we were forced, as we





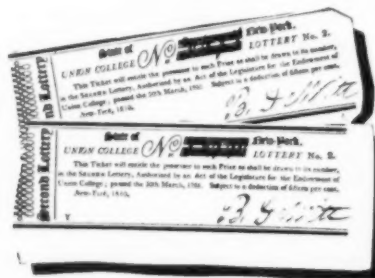
**FINANCIAL AID.** It's more important than ever before. Loans, payable after graduation, ease immediate worries.



**FRATERNITIES.** Through dances and organized activities, they satisfy important social needs.



**COLLEGE HISTORY.** Union College in 1795, and two lottery tickets (1810), the sale of which helped finance the institution early in the last century.



**CULTURAL AND SOCIAL ATMOSPHERE.** Union recognizes that an important part of a college education is acquired outside the library, classroom, laboratory.





**ENVIRONMENT.** Union College, located in a modern industrial and research center, offers engineering students firsthand knowledge.

wrote the copy, to reexamine and sharpen the image of the college. We find that we are using the viewbook more and more for reference purposes, lifting or adapting the copy for photo captions and background for news and feature stories. The actual organization of subject matter — the plot of the book — has formed both an outline and check list for a college movie and a filmstrip.

Another dramatic contribution the viewbook is making is a pictorial one. Photographs taken for the viewbook have been used extensively in two of our college yearbooks, by secondary schools for "college night" displays, in news and feature stories, and as illustrations in magazines and books.

Most rewarding has been the part played by our photographs in the presentation worked up a year ago by the United States Information Agency to demonstrate to the world the important role of America's small colleges. This photographic exhibit, when completed, is to be shown by the U.S.I.A. in American embassies and consulates throughout the world.

#### **Cooperative Project**

The success of a viewbook is directly dependent on the involvement in its planning and production of the faculty, staff, students, alumni, trustees and friends. College publications cannot be a responsibility completely delegated to the public relations office to be turned out more or less removed from the realities of the day-to-day campus life.

Much of the planning and most of the coordination and administrative support must come from the public relations office, but in the last analysis, any publication, if it is to speak for the college and for higher education, and meaningfully catch something of the true spirit of each, must embody as many as possible of the ideas, the suggestions, the thoughts, the criticisms, and the feelings of *all* the persons who make up the college or university. ■



**ALUMNI.** They are the medium through which a college exerts its greatest influence upon the course of civilization. Space and Missile Engineer Donald E. Mullen (class of '49) worked out the concept for this manned space capsule.





# ***When Student Records Are Processed by Machine***

**Fifteen standards for evaluating  
automatic punched card procedures**

**WILLARD O. STIBAL**

Coordinator of Student Teaching and Director of Campus School  
Eastern Montana College of Education, Billings

***The 'crude pioneer condition' of most of the automatic punched card units in many colleges and universities prompted Mr. Stibal to write this article. He has worked out evaluative standards for punched card methods as applied to the personnel records of students and to student reports. He submitted 19 such standards to 10 university administrators trained in at least some aspects of business machine supervision. Of these 15 were found pertinent and acceptable.***

**R**ECENTLY as a consultant I had an opportunity again to study automatic punched card procedures in one of the larger teachers colleges as well as such procedures in a large state college.

Comparing the two situations with previous inventories of procedures in other colleges and universities, I carried away certain impressions. Frequently, the larger colleges and universities seem to be so highly departmentalized that machine processing has relatively limited uses in terms of the broader on-goings of each institution. Unless special administrative plans are implemented so as systematically to service a variety of separate and somewhat autonomous divisions, the net effect would be either to negate extensive automatic punched card processing or to support an expansion of a variety of large and expensive machine processing units on a particular campus.

In many smaller colleges or universities, it appears that the punched card machine units might be made more readily available to the various offices. However, the limited administrative load or the limited demand for services in these selected schools tends to establish only a restricted approach to the machine processing of valuable records and related research.

Although recognizing and respecting a unique difference in institutional philosophy and in administrative methodology, I have attempted to find acceptable general evaluative criteria for punched card methods as applied to student personnel records and reports.

Nineteen kinds of principles, representing statement transpositions of the analysis of actual college and university punched card practices, were submitted to 10 university administrators trained with at least some aspects of business machine supervision. Each geographical section of the United States was represented in the personnel of the survey. A 100 per cent return of the questionnaire was achieved and the responses to the 19 numbered principles are analyzed herewith.



**Agreement Reached for Each Standard by 10 University Heads**

Number of Principle	(1) People Favorable or Unfavorable		(2) Judges Favorable		(3) Judges Unfavorable	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
1	10	100	9	90	1	10
2	10	100	10	100	0	—
3	9	90	9	90	0	—
4	10	100	9	90	1	10
5	6	60	0	—	6	60
6	5	50	5	50	0	—
7	9	90	9	90	0	—
8	9	90	9	90	0	—
9	5	50	0	—	5	50
10	6	60	5	50	1	10
11	10	100	10	100	0	—
12	9	90	9	90	0	—
13	10	100	10	100	0	—
14	10	100	10	100	0	—
15	10	100	10	100	0	—
16	10	100	10	100	0	—
17	10	100	10	100	0	—
18	8	80	8	80	0	—
19	10	100	10	100	0	—

The method for testing the significance of the foregoing response was based on the adoption of binomial expansion for the measurement of exceptionalness.\* Applying this test, I found that 15 of the original 19 principles were accepted as evaluative standards for application to pertinent automatic data processing procedures.

### 15 Principles Accepted

1. Conduct a comprehensive student records survey within the college or university to determine how automatic punched cards are used in connection with student records and reports.

2. Coordinate automatic punched card methods and automatic punched card records for the divisions, agencies or units of the college or university.

3. Make a study of automatic punched card machines in terms of the time schedule needed to construct a certain type of student record or report.

4. Provide a central office or agency for the automatic punched card service for the entire institution.

5. Plan a program involving automatic punched card methods that will provide timely and relevant information about students to all those staff members who, as advisers or counselors, work with students.

6. Make available to individual staff members or staff groups expert services relating to the construction and the use of automatic punched cards.

7. Develop and maintain adequate manuals of directions for the construction of various automatic punched card student records.

8. In special individual cases or in areas of human behavior where such automatic punched card records are not presently arranged to furnish adequate information to staff members who work with students, construct additional student records by other means to supplement the automatic punched card records.

9. Include the routine punching of significant student data into automatic punched cards for research work.

10. Make available to authorized persons for research purposes student research data as punched into the punched cards.

11. See that student records and reports as constructed from these cards are designed in orderly fashion so that student information for different time periods can be easily compared.

12. List student information that is punched into these cards or tabulate such information by machine methods rather than by tedious manual means.

13. When an automatic punched card is used as a certificate or as a student record, indicate the meaning of the punched information by column code sheets or manuals for the benefit of those persons or offices that may need the information.

14. Use the individual information punched into these cards in the construction of various types of student records.

15. Make certain that automatic punched card procedures are sufficiently flexible so that they will serve the diverse needs and functions of the entire institution. ■

\*Johnson, Palmer O.: *Statistical Methods in Research*. New York: Prentice Hall, Inc., 1949. Pp. 57, 58.





**COSTLY ACCIDENTS** will decrease as expenditures for safety increase.

## HOW TO FIGURE COST OF EMPLOYEE ACCIDENTS

**ROLLIN H. SIMONDS**

Professor, Business Administration  
Michigan State University, East Lansing

**W**HY do we want to know the cost of employee accidents in a university? Is it purely an academic question, or can the figures, once obtained, be put to good use?

The money involved is not inconsequential. Recently I took a quick look at the records of a major university for the year 1958. This was enough to see that the cost to it of employee accidents for the year was between \$40,000 and \$60,000. I shall consider those figures in detail later.

In business the various departments are expected more and more to be able to show what they contribute to the profitable operation of a concern, particularly staff departments, which always come up for scrutiny when the pressure is on to cut costs. A minimum degree of safety or control over operations is, of course, essential to any enterprise. The problem that arises is how far to go beyond that minimum. Here executive judgment enters the picture.

From experience we know that an organization with a poor accident

From a paper presented at the annual meeting of the Campus Safety Association of the National Safety Council, 1959.



## Here is a reliable new method of finding accident costs

record can put in a good safety program and cut its injuries in half. Then it can further increase its efforts and continue to reduce the frequency of accidents. It cannot then drop its safety work and expect the good safety record long to continue. On the other hand, it cannot expect indefinitely to get proportionately greater reduction of injuries as more and more attention is focused on accident prevention. Diminishing returns set in. After a certain point, further increase in the rate of effort — while continuing to make improvement — will bring proportionately less gain.

### Management's Decision

Management has to decide how much effort beyond the irreducible minimum it is reasonable to put into accident reduction, just as it has to decide how much to put into research or public relations. If the safety specialist can point out clearly to the one who makes these decisions how much accidents cost, then that executive has a basis on which to estimate how much of the expenditure for safety is going to be recovered in accident savings.

Of course, this should never be the sole purpose of safety work. Its clearest and highest objective is the reduction of injuries. Further, the safety director must be in a position to know what effect specific safety measures have on operations — whether they cause delays, as is sometimes charged, or whether they actually speed up and improve operations either because of removal of a source of danger and fear or because of more complete control over activities. On many campuses it is quite possible that an increase in safety efforts would actually reduce total operating costs. An effort to save a few dollars by turning out lights in a passageway at times when little use is made of it may turn out to be false economy when account is taken of the possibility of accidents and their probable cost.

Let us consider now the elements of cost in employee accidents.

First, there is the insurance cost. This is the cost of complying with the workmen's compensation laws. It includes compensation payments to the

injured employee or his dependents, medical costs, and insurance overhead. The insurance premiums typically run about double the amount paid out for compensation and medical attention. An organization large enough and willing to carry its own risk may avoid that insurance overhead, but it will have some administrative costs.

The rest of the accident costs are the uninsured costs. The valid elements of uninsured costs are the following:

1. Cost of wages paid for working time lost by workers who were not injured.
2. Net cost to repair or replace material or equipment damaged or disarranged in an accident.
3. Cost of wages paid for working time lost by injured workers other than workmen's compensation payments.
4. Extra cost resulting from overtime work necessitated by an accident. Only the difference in cost between regular and overtime is involved here.
5. Wage cost of supervisors' time required in connection with the accident.
6. Wage cost resulting from decreased output of injured worker after return to work.
7. Cost of learning period of new worker.
8. Uninsured medical cost borne by employer.
9. Cost of handling the administrative aspects of compensation.
10. Miscellaneous unusual costs (occurring in less than 2 per cent of accidents).

### Some Items Omitted

This foregoing list is not the same as the list of indirect or hidden costs prepared 30 years ago by William Heinrich. Several items are included in both lists, but careful analysis led to the omission of some items on the Heinrich list as invalid or requiring extreme qualification.

This raises the question of the old easy "out" to finding accident cost, i.e. find the compensation and medical cost, multiply that so-called "direct" cost by 5, and announce the resulting product as the cost of the accidents. Since there are probably some persons

who have read about the famous 4 to 1 ratio of "indirect" to "direct" costs in old textbooks or magazines, I had better indicate why that is not of much use in finding the total cost of accidents to a university or to any other organization.

Mr. Heinrich made an important contribution to industrial safety in impressing people with the fact that there are significant accident costs in addition to compensation and medical expense. However, we have made progress since 1926, the date of the "4 to 1" study.

### Reasons for Not Using Ratio

At least four general reasons for not attempting to use the 4 to 1 ratio will be mentioned:

1. Heinrich, originator of the ratio, never intended it to apply to individual organizations. He has said that the ratio may be 2 to 1 in one company and 8 to 1 in another; only over a large section of the economy would it work out as 4 to 1.

2. There is a good deal of doubt as to the reliability of the ratio for even large areas, such as the industry of a state. The 1926 study was conducted without a precise, standard frame of costs. Cases were drawn from the files of the insurance company. Then assistants went out to visit the concerns in which the injuries had occurred to try to figure out what had happened.

3. Even Heinrich and others presumably well acquainted with the ratio have used it loosely. For example, Heinrich called the compensation and medical cost the direct cost. Insurance company overhead (roughly equal to the direct cost) was not included in either the direct or indirect cost. Sometimes, however, safety engineers and even Heinrich himself would multiply the entire insurance cost by 5 to get the total. This sometimes resulted in a 6 to 1 or 8 to 1 ratio of "indirect to direct."

People, including Heinrich, have illustrated the ratio by implying that the indirect costs of a lost-time case would typically be four times the direct cost, and the same for doctors' cases. This is nowhere near the facts. My study of a few thousand accidents



## Analysis of a year's accident costs at one university

has shown such a relationship is very unusual. Actually, the typical lost-time case has compensation and medical costs of from \$400 to \$500 and uninsured costs of around \$125. The ratio would be nearer  $\frac{1}{2}$  to 1 than the reverse. The heavy uninsured costs are accumulated in the very large number of minor injuries where there is little or no so-called "direct" costs.

4. Even within classes of injuries, such as lost time or doctors' fees, I found no correlation between the "direct and indirect" costs in individual cases. That being the case, we could not expect to find a constant ratio between total direct and total indirect costs in an individual organization unless the following six averages and three ratios held constant:

Average direct cost per lost-time case.

Average direct cost per doctor's case.

Average indirect cost per lost-time case.

Average indirect cost per doctor's case.

Average indirect cost per first-aid case.

Average indirect cost per no-injury accident.

Ratio of doctors' cases to lost-time cases.

Ratio of first-aid cases to lost-time cases.

Ratio of no-injury accidents to lost-time cases.

Finally, even if the ratio did hold good, few presidents, controllers or other managers will place serious reliance on a figure obtained by taking a known dollar amount and then multiplying it by 5 on the basis of an old study never directly related to the organization to which the cost is to apply.

### New Method

The method I developed for the National Safety Council provides a cost figure more reliable in fact and much more convincing to management.

The method is this: Total cost—insurance cost (or compensation and medical plus administration for self-insureds) plus .....

A times no. lost-time cases

B times no. doctors' cases

C times no. first-aid cases

D times no. of no-injury accidents

The constants, A, B, C and D, are

average uninsured costs found in a pilot study in the organization in question for the corresponding category of cases. When a safety engineer does not want to take the time to find average costs in his concern for part or all of these classes of accidents, he may use, with somewhat reduced reliability, the average cost figures obtained in my study.

One big advantage of this method is that the total does not, as in the 4 to 1 system, depend on the vagaries of a single figure which is to be multiplied by 5. One serious infection resulting from an apparently small accident could increase a year's compensation and medical cost threefold. Under the 4 to 1 method this infection would cause the apparent uninsured costs to be multiplied 3 times.

In my method, the numbers of each of the three types of injuries are taken from the actual records of the organization concerned. The number of no-injury accidents may be recorded or estimated. Averages are used for the cost per case. If one average or even two averages are incorrect, such inaccuracy affects only the one or two portions of the total uninsured cost. Thus unusual circumstances or use of one or two unsuitable averages do not throw the whole estimate out of line.

Following is a typical analysis of a year's accident cost for a manufacturing concern, the type of organization to which the cost studies have been most frequently applied.

Insurance cost .....	\$10,500
Uninsured costs:	
10 LT's @ 125 .....	1,250
31 Dr. Cases @ 30 ..	910
1928 F. Aid @ 6 ....	11,568
10 No-Injury	
Acc. @ 220 .....	2,200
	<hr/>
	\$26,428

Now let us return to the 1958 records of the university I mentioned earlier. Its over-all frequency rate was probably somewhere between 6 and

9. This is hard to determine because of the difficulty of estimating working time for faculty. In some areas, notably food service and dormitory work and in building and maintenance, the rate was much higher. The university in question is self-insured.

Its records show:

116 lost-time cases

650 first-aid cases

\$13,169 compensation payments

5,607 paid in excess of required compensation (a liberal wage policy toward injured)

4,263 off-campus medical cost

6,914 on-campus medical center

---

\$26,700 Total on business records

Calculation of total cost:

Lost-time cases:

Specifically recorded costs: \$26,700

Other uninsured costs

116 cases @ 120 average 13,920

First-aid cases:

Specifically recorded costs:

(Medical) ..... 3,250

Other uninsured costs

650 cases @ \$4 ..... 2,500

---

\$46,370

It is improbable that all injuries of the first-aid type were reported. Apparently many received brief attention and did not get to the hospital.

An estimate for nonreported first-aid cases might be 1200. At an average cost of \$3, the total would be \$3600.

Experience in industry has suggested there may be about as many "no-injury" accidents (eight or more man-hours lost or \$20 of property damage) as there are lost-time cases. Taking 50 (less than half the number of lost-time cases) at \$100 each, the cost would be \$5000.

Probably the additional uninsured costs would amount to \$8600. The probable total would then be \$54,970.

This had best be treated as \$50,000 or \$55,000 to avoid spurious accuracy. A more thorough study of this university's records and brief pilot studies to substantiate average uninsured costs per case of each type would give greater accuracy and reliability to the estimate. ■





In this study 263 colleges report

on their financial problems and their

## Investment Practices

**T**O ASSURE broad representation among colleges for a study of their financial problems and investment practices, questionnaires were mailed to hundreds of educational institutions. Replies were received from 263. The endowment funds of the preparatory schools, colleges and universities responding total \$2.6 billion, more than half of the estimated \$5 billion total, at market value on Dec. 31, 1958, of all such endowments in the United States.

### Who Pays the Bills?

Despite their energetic and successful efforts to raise money, few schools are "rich" in the sense that they obtain a major portion of their income from endowments and gifts. More than half of all private school, college and university operating income in 1958 was derived from tuition fees. From 2 to 19 per cent more of operating income was derived from payments for board, rent, books and so forth. As might be expected, the taxpayer carried the heaviest burden in the public school system.

Private colleges and universities, on average, derive only 10 cents of each dollar of operating income from endowment fund earnings. Grants and gifts account for 16 to 21 cents of each income dollar. Of all the endowed private educational institutions, preparatory schools receive the smallest proportion of operating income from endowments and gifts.

In the last five years the tab paid by the schools for total academic salaries, including those of additional staff members, has increased from 28 to 41 per cent on average. Substantial increases in total nonacademic salaries and in maintenance and equipment costs have further swelled total running expenses.

There are two main reasons for higher costs: (1) The student population has increased. The babies of the 1941 to 1946 "baby boom" are preparatory school and college students today. Larger academic and nonacademic staffs are needed. (2) Inflation has placed higher price tags on goods and services required to keep schools running.

The halls of ivy, crowded today, are not nearly so crowded as they will be 10 years from now. Some 25 million persons in this country are between the ages of 14 and 24, the potential secondary school to postgraduate student segment of our population. But there are 40 million children in the country under the age of 10. Even if no greater proportion of American youth attends college, we must expect our college enrollments to be almost double today's figure by the time these children reach college age.

This burgeoning school population inevitably means further increases in total costs for salaries and maintenance. It means outlays for new buildings. Any further inflation will add to the burden. (Cont. on p. 60)

**HUGH W. LONG & CO., Inc.**  
Elizabeth, N.J.



**Table 1 — Sources of Each Dollar of School Operating Income  
(Average for Each Group)**

Type	Appropriations of Public Funds	Tuition Fees	Other (incl. food, rent, book receipts)	Endow- ment Income	Grants and Gifts
	Cents	Cents	Cents	Cents	Cents
Private Schools					
Preparatory	—	89	2	5	3
Colleges	—	56	18	10	16
Universities	1	49	19	10	21
Public Schools					
Colleges	71	22	5	2	—
Universities	55	19	17	2	7

**Table 2 — Increases in Total School Expenditures Between  
1953 and 1958**

Type	Academic Salaries	Nonacademic Salaries	Maintenance & Equipment
	%	%	%
Private Schools			
Preparatory	30.6	27.4	34.8
Colleges	35.0	28.9	30.2
Universities	36.1	27.5	29.8
Public Schools			
Colleges	28.1	20.4	22.2
Universities	41.0	33.4	45.0

(Continued From Page 59)

If past patterns are repeated, the greater portion of the added expense must fall on parents unless educational institutions can increase their endowment income and revenue from gifts and grants in proportion to the rise in costs.

**Table 3 — Increases in Tuition Fees From  
1953 to 1958**

Private Schools	Per Cent
Preparatory	18.9
Colleges	28.1
Universities	31.2
Public Schools	
Colleges	29.1
Universities	42.9

In the last five years tuition fees in public colleges and universities have increased in proportion to the increase in expenses, whereas private institutions have been able to hold these increases to smaller percentage figures.

#### Encourage Long-Range Plan

Many schools, recognizing the fact that the greatest burden in financing college costs falls on parents, are encouraging their alumni to plan long-range personal savings or investment programs to help meet the increased costs of sending their children to col-

lege. Articles in alumni publications, letters to members of the alumni associations, even pamphlets, have been used to "educate" alumni about the facts of future tuition costs. While private colleges and universities have taken the lead in this area, many public universities and colleges have followed the same course.

**Table 4 — Per Cent Encouraging Savings  
and Investment Programs Among Alumni  
(237 Schools Reporting)**

Private Schools	Per Cent
39 Preparatory	13
118 Colleges	28
30 Universities	28
Public Schools	
30 Colleges	20
20 Universities	16

#### Sources of New Revenue

Excluding appropriations of public funds, all types of educational institutions represented in the survey indicated that increased tuition fees had been the single most important source of added revenue during the last five years of the rising costs shown in Table 2. Fund raising campaigns ranked second. Most endowed institutions stated that investing a greater proportion of endowment funds in common stocks

had been the third most effective method of increasing income.

Cost reduction programs, while helpful, could not be carried beyond a reasonable point. Nevertheless, one university found that such savings offset salary adjustments for nonacademic personnel. In other cases, schemes such as renting school facilities for conventions and other gatherings during the summer season added to revenue.

None of these plans solves the problem of rising costs.

#### Plans for the Future

Future educational plans cannot be reduced entirely to statistics about college attendance and costs. In 1952 the median number of school years completed among persons between 25 and 29 years of age was 12.2. The field of technical and scientific knowledge has been expanded to such an extent that 16 years of education may be inadequate for the graduating class of 1962. In such a society, parents have a greater obligation to provide a college education for their children than ever before.

It is not surprising that in economic systems that differ from ours the practice of subsidizing young intellectuals has been established. In our own country the path has not as yet been determined. There is talk of federal government grants to educational institutions. Private industry has become increasingly aware of the need for scholarships, grants and other financial aid. College and university presidents have been described as "men with begging bowls," since fund raising has become such an important part of their jobs. But parents seem most likely to have to pull the major part of the increased financial load, aided by the efforts of the school administration itself to raise money, increase operating efficiency, and accommodate more students.

#### Plans for Larger Enrollments

Some schools have taken the position that they can best maintain the quality of their services and expand their curriculums by refusing to accommodate a greater number of students in the near future. The majority of preparatory schools report that they will not increase the number of students admitted. About one-fifth of the private colleges have made the same



decision. The vast majority of schools takes the opposite view.

**Table 5 — Are Schools Planning for More Students in Near Future? (263 Schools Reporting)**

	Per Cent Answering "Yes"
<b>Private Schools</b>	
43 Preparatory	37
124 Colleges	80
32 Universities	84
<b>Public Schools</b>	
39 Colleges	90
25 Universities	100

Most of them plan to enlarge classes; many plan to offer special evening courses. Still others plan to provide accelerated courses, with students attending classes the year round. Some public universities, with physical facilities at the bursting point, will use closed-circuit television.

### Building Program

Some 80 per cent of the schools studied plan to expand physical facilities. Within the next five years, 201 schools and colleges will spend some \$1.5 billion for expansion and replacement of plant and equipment. Of this amount, \$874 million will be spent by public colleges and universities. The remaining \$585 million projected by private schools and colleges must be financed in large part through fund raising campaigns.

**Table 6 — Estimated Expenditures for Plant and Equipment, 1960-65 (201 Schools Reporting)**

<b>Private Schools</b>		
28 Preparatory	\$ 19,276,000	
90 Colleges	205,969,000	
27 Universities	360,500,000	
		\$585,745,000
<b>Public Schools</b>		
33 Colleges	132,335,650	
23 Universities	741,960,405	
		874,296,055
<b>Total</b>		\$1,460,041,055

### Future Fund Raising

In an effort to raise funds and obtain future gifts, many colleges have acquainted their alumni with the use of life income trusts as a means of making gifts to the school. Income from such trusts is paid to the giver during his lifetime with the principal going to the college or university on his death.

In some cases a spouse or other person designated by the giver is named as intermediate income beneficiary. In this way a husband and wife can

enjoy the income from investments or other property during their lives and, in many cases, they are able to obtain a federal income tax deduction because of the gift.

The college often finds this means of obtaining future gifts more effective than encouraging bequests in wills. Wills may be changed, property sold or subjected to estate taxes that diminish the amount of the gift eventually received by the college or school.

**Table 7 — Percentage Encouraging Use of Life Income Trusts as Means of Fund Raising (243 Schools Reporting)**

Private Schools	Per Cent
39 Preparatory	18
120 Colleges	56
32 Universities	59
<b>Public Schools</b>	
32 Colleges	13
20 Universities	50

### Investment Funds

An important part of the colleges' planning has centered on the administration of their endowment funds. Because of the need to increase endowment fund values, educators are expressing heightened interest in common stock investing, and the manner in which other colleges and universities select and administer endowment investments.

At the end of 1958 the schools included in this survey had total endowment funds of \$2.6 billion.

**Table 8 — Market Value of Endowment Funds (193 Schools Reporting)**

Private Schools	Dec. 31, 1958
23 Preparatory	\$ 83,613,654
108 Colleges	373,695,096
30 Universities	1,726,242,784
<b>Public Schools</b>	
10 Colleges	15,916,165
22 Universities	417,103,547
<b>Total</b>	\$2,616,571,246

Of the 193 schools reporting the value of their endowment funds, 109 had funds valued at less than \$2 million, 49 had funds valued between \$2 million and \$10 million, and 35 reported funds of \$10 million or more. Of the 193 schools, 170 held some common stock investments at the end of 1958. The majority of the private schools in the survey reported that the proportion of total investments in common stocks had increased to some extent since 1953.

**Table 9 — Percentage Reporting Increased Common Stock Investments (140 Schools Reporting)**

	Endowment Funds Valued at		
	Less Than \$2 Million	From \$2 to \$10 Million	Over \$10 Million
<b>Private Schools</b>	%	%	%
Preparatory	75	100	100
Colleges	59	85	100
Universities	62	75	100
<b>Public Schools</b>			
Colleges	—	33	—
Universities	33	75	67

Variations in investment patterns are wide. Figures range from 23 schools with no common stock investments to 17 with more than 75 per cent of their total funds in common stocks. On average, 45.1 cents of every endowment dollar was invested in common stocks at the end of 1958.

Public colleges and universities place a greater portion of their investments in bonds than in common stocks, while the reverse is true among private schools. The size of the endowment fund also influences investment policies.

Great publicity has been given to the fact that educational institutions have espoused common stock investing. One hundred forty schools listed the percentage of total funds invested in common stocks at the 1953 and 1958 year ends. These reports indicate that the trend toward common stock investing has been passive, rather than active.

For example, the Dow Jones Industrial Average, a measure of the movements of stock prices, increased from 281.00 to 583.65 in the five years covered by Table 11, indicating that common stock prices in general had more than doubled in that period of time. Had these schools merely retained the common stocks they owned in 1953 and invested any new monies in common stocks in the same proportions that existed in the endowment fund when each new investment was made, the percentage of common stock investments at the 1958 year end would have been substantially greater than that actually reported by the colleges.

A fund that remained static for the last five years, making no new investments of any kind and selling no investments, would have experienced a much larger increase in the proportion of investments held in common stocks than did these colleges.

(Continued on Page 62)



**Table 10 — How Schools and Colleges Invest Their Endowment Dollars\* (186 Schools Reporting)**

Type	Bonds Cents	Preferred Stocks Cents	Common Stocks Including Mutual Funds Cents	Real Estate and Mortgages Cents	Other Cents
<b>Private Schools</b>					
Preparatory	37.8	5.8	55.0	0.9	0.5
Colleges	26.9	5.4	49.2	14.6	3.7
Universities	36.5	3.3	50.0	7.5	2.7
<b>Public Schools</b>					
Colleges	41.3	2.2	39.5	16.6	0.4
Universities	72.8	1.9	19.1	3.6	2.6
<b>All Schools, Private and Public</b>					
Endowments up to \$2 million	26.5	6.3	36.5	21.3	9.4
Between \$2 and \$10 million	26.3	5.7	46.0	17.4	4.6
Over \$10 million	42.9	3.2	45.2	6.2	2.5
Average of all schools	41.1	3.5	45.1	7.6	2.7

\*Averages weighted to reflect the dollar amounts invested.

**Table 11 — Increases in Common Stock Investments (140 Schools Reporting)**

	Per Cent Invested in Common Stocks	
	Year End 1953	Year End 1958
<b>All Schools, Private and Public</b>	%	%
65 Endowments up to \$2 million	20.0	26.3
41 Endowments, \$2 to \$10 million	31.8	39.9
34 Endowments over \$10 million	38.0	42.9

**Table 12 — Estimated Change in Common Stock Proportion of Total Investments as Result of 100% Market Rise, 1953-58**

Endowment Funds	Per Cent Actually Held in Common Stocks, 12/31/53	Estimated % in Common Stocks After 100% Gain in Stock Prices	Per Cent Actually Held in Common Stocks, 12/31/58
	%	%	%
Up to \$2 million	20.0	33.3	26.3
\$2 to \$10 million	31.8	48.3	39.9
\$10 million and over	38.0	55.1	42.9

Example: At the 1953 year end, 38c of each dollar of endowment funds over \$10 million in size was invested in common stocks and the remaining 62c was invested in real estate, bonds, preferred stocks, and so forth. Had the 38c in common stocks doubled, to become 76c, the average dollar would have grown to \$1.38 (62c + 76c) of which 76c, or 55.1%, would represent common stock investments. This assumes that the increase in real estate values offset any decline in the value of bonds.

These observations assume that the common stocks held or purchased by the colleges advanced in value as much as the general stock market.

If we assume that no great fluctuations occurred in the value of other investments, Table 12 indicates that during this period some endowment funds may have been sellers of common stocks rather than buyers.

Considering the need for increasing endowment fund values, we may well ask why no active attempt was made by educational institutions to participate to a greater extent in the long-term upward trend of common stock prices. Of course, some gifts to endowment funds are made with "strings attached," so that the investment choice is not left to the college. But the difficulties of supervising common stock investments under present college systems of investment administration would seem to provide a better answer to the question.

#### Diversification of Stocks

Can a school, college or university adequately diversify its common stock investments, select them with care, and then continuously supervise them? What conflicts of interest arise? Who is responsible for investment management?

The following statistics show exactly what one would expect, namely, that the smaller the endowment fund, the more limited the diversification. On average, only private universities with endowment funds of \$10 million or more own as many as 100 different common stock issues. The average holding for all educational institutions with endowment funds of less than \$2 million is between 20 and 25 common stocks. A total loss in one issue could equal an entire year's income from all other issues held.

**Table 13 — Common Stock Diversification in Endowment Funds (145 Schools Reporting)**

Av. No. of Common Stocks held by Schools With Endowment Funds of —	Less Than \$2 to \$10 Over \$10		
	\$2 Million	Million	Million
<b>Private Schools</b>			
Preparatory	13	41	76
Colleges	23	59	75
Universities	21	88	104
<b>Public Schools</b>			
Colleges	17	52	—
Universities	14	56	76
Average, all schools	18	65	90



Which common stocks? All told, these schools named a total of 254 stocks among their five largest holdings. No one of these stocks received a "majority" vote, that is to say, none appeared among the five largest holdings of more than 50 per cent of the schools represented in the study. The closest was Standard Oil Company of New Jersey, which appeared on 48 per cent of the lists, followed by American Telephone and Telegraph Company, which appeared on 30 per cent of all the lists, but was more favored by schools with small endowment funds than by those with larger funds. The wide variations in other selections indicated an emphasis on so-called blue-chip stocks on one hand and, at the other extreme, issues of local companies and some ventures into growth stocks.

#### Analysis Must Be Subjective

Any analysis of the common stock investments of colleges must be subjective. Two conclusions were reached by the authors: (1) Either the small size of the endowment fund or the time and difficulty involved in selecting and supervising a well diversified list of investment holdings tend to limit diversification. (2) Limited diversification in most college investments leads to an ultraconservative investment list.

Of the total of 195 schools with endowment funds, 50 (or only 25.6 per cent) obtain professional investment supervision from investment advisory firms or bank trust departments, or through mutual fund investments.

Only one school (with an endowment fund of more than \$10 million) retains an endowment fund manager on its administrative staff. The majority of schools of all types place investment supervision in the hands of an investment committee or the board of trustees. In some cases the controller or treasurer of the school manages investments, reporting regularly to the trustees.

Of the 180 schools indicating the frequency with which investments are reviewed, 61, or one-third, employed some means of continuous supervision. The proportion was slightly smaller where endowment funds amounted to less than \$2 million; slightly greater in the \$2 million to \$10 million category. On average, more than half the schools reviewed investments quarter-

ly or even less frequently, although provisions are made by most schools for interim review in case of emergency.

Because most systems of review and selection of securities were devised when bonds were the major investment vehicles, the origin of investment management customs among colleges is easily traced. Whether such provi-

sions for review are adequate under today's changed investment conditions is a matter for consideration. Another question is whether the individuals responsible for the management of school investments can spare from their other tasks the time necessary for the selection and administration of an adequately diversified list of common stock investments. ■

**Table 14 — Five Largest Individual Common Stock Holdings  
(145 Schools Reporting)**

All Schools Combined	Common Stock Issue	Under \$2 Million	From \$2 to \$10 Million	Over \$10 Million
%		%	%	%
48	Standard Oil of N.J.	33	54	72
30	American Tel. & Tel.	33	27	28
20	General Electric	13	22	30
19	General Motors	17	25	17
18	DuPont	9	27	25

**Table 15 — Who Supervises Endowment Fund Investments?  
(195 Schools Reporting)**

	Total All Schools	Schools With Endowment Funds		
		Under \$2 Million	\$2 to \$10 Million	Over \$10 Million
Investment committee	78	39	16	23
Board of trustees	42	30	9	3
Bank trust department	30	18	10	2
Investment advisory firm	20	9	7	4
Controller or treasurer	9	6	2	1
Endowment fund manager	1	—	—	1
Other	15	8	5	2
	195	110	49	36

**Table 16 — Frequency of Investment Review**

Interval	Total All Schools	Endowment Fund		
		Under \$2 Million	\$2 to \$10 Million	Over \$10 Million
Continuous	61	28	23	10
Monthly	24	9	7	8
Quarterly	50	29	14	7
Less frequently	45	30	7	8
	180	96	51	33





## ***This Chapel-Auditorium Had To Be Different***

**... as it must accommodate the entire student body  
for regular daily worship and meditation.  
This meant quick entrances or exits.**

### **CHARLES E. STADE**

Charles Edward Stade & Associates  
Park Ridge, Ill.

**V**ALPARAISO UNIVERSITY in northern Indiana has one of the country's largest, most impressive, and most unusual campus chapels. Although not completely finished, it is in use. It was dedicated last September as a feature of the school's 10 month centennial calendar of events.

Before the plans were drawn, a study was made of more than 80 college and university chapels all over the United States, England and Germany. Their floor plans, seating plans and location on campus were studied, but it was found that none of these chapels had been designed for regular daily worship for the whole student body. Rather, they were churches in an academic setting to which those who were more or less religiously or ascetically inclined could repair for moments of personal or collective meditation, or as a respite from academic life and pursuits.

Valparaiso, on the other hand, needed quick entrances or exits; it required sufficient space comfortably to contain a student body of 3200.

So this chapel-auditorium had to be different. It must be centered on a "university family" concept so that all members of the faculty, students

and staff could gather daily under one roof for worship and meditation at matins. There were also considerations that are the by-products of religion at a Lutheran university. It is a singing church and highly prizes cantatas, motets, choruses and organ music.

In this spirit and under these strictures the plan for the chapel-auditorium was conceived and the original designs made.

The building is set on a rise, with the old campus at its back and the new campus, still meadows, falling away before it. The chapel location at the hub of the future campus further reflects the importance of religion in Valparaiso campus life. On the main floor are seats for 2200, which, on ordinary days, will accommodate the student body and faculty with reasonable comfort. The choir balconies, as well as the side balconies, accommodate another 1100.

Comparing the structure in everyday terms, it is longer than a football field (340 feet) and rises 105 feet in the chancel peak, as high as a 10 story building.

The entire building is literally surrounded with entrances and exits so that there is a minimum loss of time

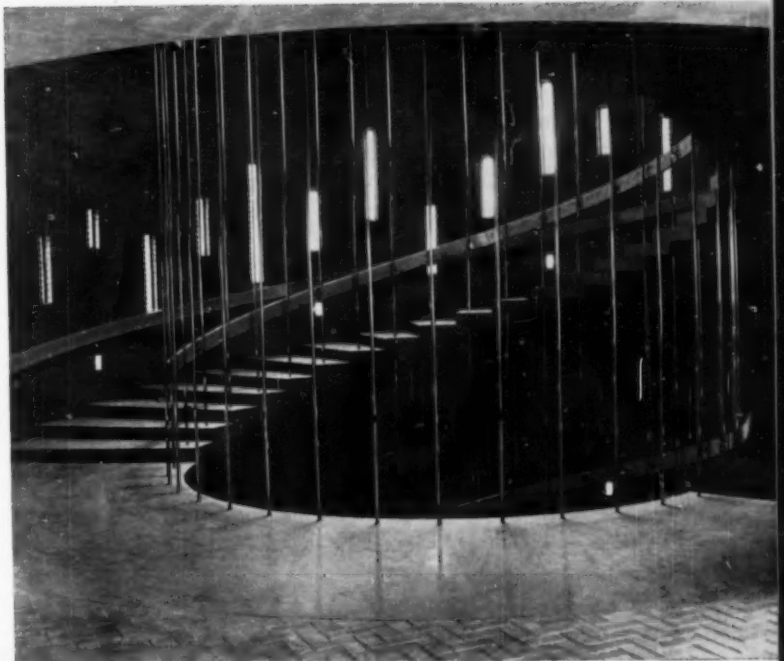


in getting the students in and out of the chapel for the regular hours of devotion set into the regular classroom schedule.

In the rear a cantilevered balcony has been designed to contain seating for orchestra and choir on ordinary occasions and services. The organ is mounted above this on the inside of the great west wall to provide complete circulation of sound. Beneath the balcony, openings have been placed all around so that it stands almost as an island in the rear of the chapel.

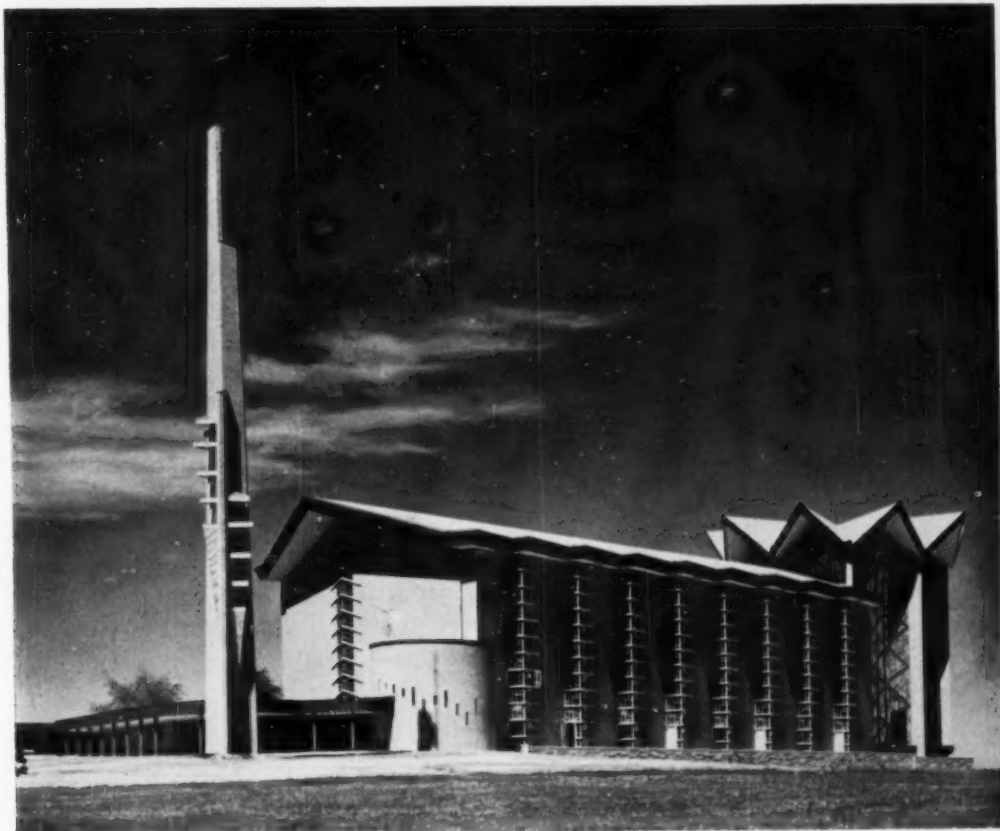
In the front of the chapel, a great series of steps running the full width of the auditorium rise up to the level of the chancel. These steps form natural risers for great cantata choruses. Between the steps and the first pews is ample space for a full orchestra to accompany the singing on special occasions.

The chancel itself is a great octagon. Eight stone piers in the chancel



**CIRCULAR STAIRWAY** leading to the balconies and choir loft.

**VALPARAISO's** chapel-auditorium, capable of seating all students, faculty and staff at the same time.





**'Simplicity has a dignity all its own, and can let the faith of young**

rise 98 feet to the steeply angled, nine-pointed roof. Its inspiration came from the Church of the Nativity, in Bethlehem. As that church was originally built by Constantine, its chancel rose higher than the nave. This scheme was followed in the design of the Valparaiso chapel-auditorium in order to give emphasis to the exalted place that religion occupies on the campus.

The chancel can be separated from the rest of the auditorium by a series of screens or curtains, as well as by a most ingenious system of lights. When it is used for worship service

and religious functions, this area is brightly lighted and becomes the main emphasis. At other times, it is darkened and becomes merely a great backdrop for choruses, cantatas and orchestra.

A black altar, 24 feet wide, stands at the center of three circular risers in the chancel center. It rests on two massive pillars, which, when completed, will bear colored mosaic symbols of the Four Evangelists and will be faced in black marble.

Ventilation, heating, lighting and sound transmission posed great challenges. Happy solutions were worked

out by the many experts called in to assist the architect, Charles Edward Stadel, Dolan and Anderson, associated architects, Park Ridge, Ill., and two principal consultants, Jean Labatut, head of the Graduate School of Architecture at Princeton University, and Adalbert R. Kretzmann, Chicago church architecture and art authority.

If this chapel-auditorium had been designed in any of the traditional styles of architecture — Gothic, Romanesque, Byzantine — not only would the cost have been prohibitive under present budget conditions, but the architecture itself would have em-

**CANTILEVERED BALCONY** serves orchestra and choir at regular services and on ordinary occasions.





people fulfill itself without being fettered to trite images and forms.'

phasized religion almost to the exclusion of all other functions that must find their expression in this building. Acoustically too, any of the aforementioned styles would have posed serious questions.

Therefore, the planning from the very beginning centered on a new expression in architecture. There would be in this chapel-auditorium the traditional long lines, commonly associated with church interiors. At both ends, however, there would be a constant reminder of the fact that associated with the cultural development of Lutheran college people are many other factors aligned with religion.

The great side piers as well as the eight piers of the chancel will, in years to come, be able to absorb the best productions of religious artists in painting, sculpture and bas-relief work done in a manner consistent with the spirit of the building itself.

Statistically speaking, 60,000 concrete blocks and more than 350,000 face brick of special size and color were used. Structural steelwork totaling 600 tons formed the basic framework. Three-fourths of an acre of glass was needed for the entire project; seven windows in the chancel alone are 85 by 22 feet. Twelve and one-half tons of putty were required to install the glasswork of the chapel.

A special brick color, Valparaiso amber, was created for the building and now is in demand on construction jobs throughout the country. The new color is also used in the school's Henry F. Moellering Memorial Library being constructed just north of the chapel.

Southwest of the building, a 143 foot, multifaced free standing bell-tower amplifies the sound of an electronic carillon housed on the lower level of the chapel; it will some day support imported cast carillon bells.

Simplicity is the keynote throughout, but this is not to be confused with barrenness. Simplicity can have a dignity all its own and can let the faith of young people spread out and fulfill itself without being fettered to outworn images and forms. ■



**CHANCEL** is reached by a series of steps running the full width of the auditorium. The steps form natural risers for great cantata choruses. Between the steps and the first pews is ample space for a full orchestra to accompany the singing.



What originally  
was the entire Lehigh  
University (below) has been  
transformed (right) into  
a useful Social Center  
for the university.



## Lehigh Landmark Remodeled as Modern Social Center

**CHARLES J. MORAVEC**

Director of Public Information  
Lehigh University, Bethlehem, Pa.

**A**CADEMIC buildings are rather like politicians in that it is often difficult for them to please even a large fraction of the constituency. But, the transformation of a historic landmark on the Lehigh University campus into a \$2.6 million University Center has met with universal acclaim.

In providing a modern center for the social life of students and faculty, we have been fortunate in preserving a building that is a symbol of the university to more than 17,000 living alumni. More than that, there is now ample space under one roof for large educational conferences, which will aid in the development and extension of the work of the university's three colleges, as well as of its graduate school.

Since the end of World War II, the dining, social and meeting room facilities on the Lehigh campus have been

inadequate. Approximately half of the undergraduates were housed and fed in 30 chapters of national social fraternities. Another thousand lived in six residence halls. The university operated a single cafeteria, which was too small 15 years ago. With an enrollment approaching 2600, the problem was serious. Hundreds of young men were forced to eat in downtown restaurants. Our 86 student and faculty organizations could meet only in classrooms, and there were limited facilities for scheduling conferences and meetings by academic, technical or research groups.

The solution appeared to be a University Center. After careful consideration of several plans, the university trustees voted to use Packer Hall, the first educational building on the campus. The suggestion came from the university architect, Jens Fredrick

Larson of Larson & Larson, Reynolda, N.C. He was impressed by the superb location of Packer Hall on a hillside overlooking the campus as well as by its sturdy construction of this pioneer building.

The Victorian Gothic structure had been built in 1869. Of Potsdam sandstone, dominated by a 135 foot tower at one end, it was 60 by 215 feet, had good proportions, and possessed several areas with high airy ceilings and sound acoustics. The foundations were excellent.

The architect's plans called for the addition of a wing, 80 by 180 feet, construction of an arcaded gallery to the north, insertion of a steel frame in the walls, and removal of many interior walls and partitions.

A campaign conducted by alumni throughout the nation raised the \$2 million necessary for renovation and





#### **DINING ROOM**

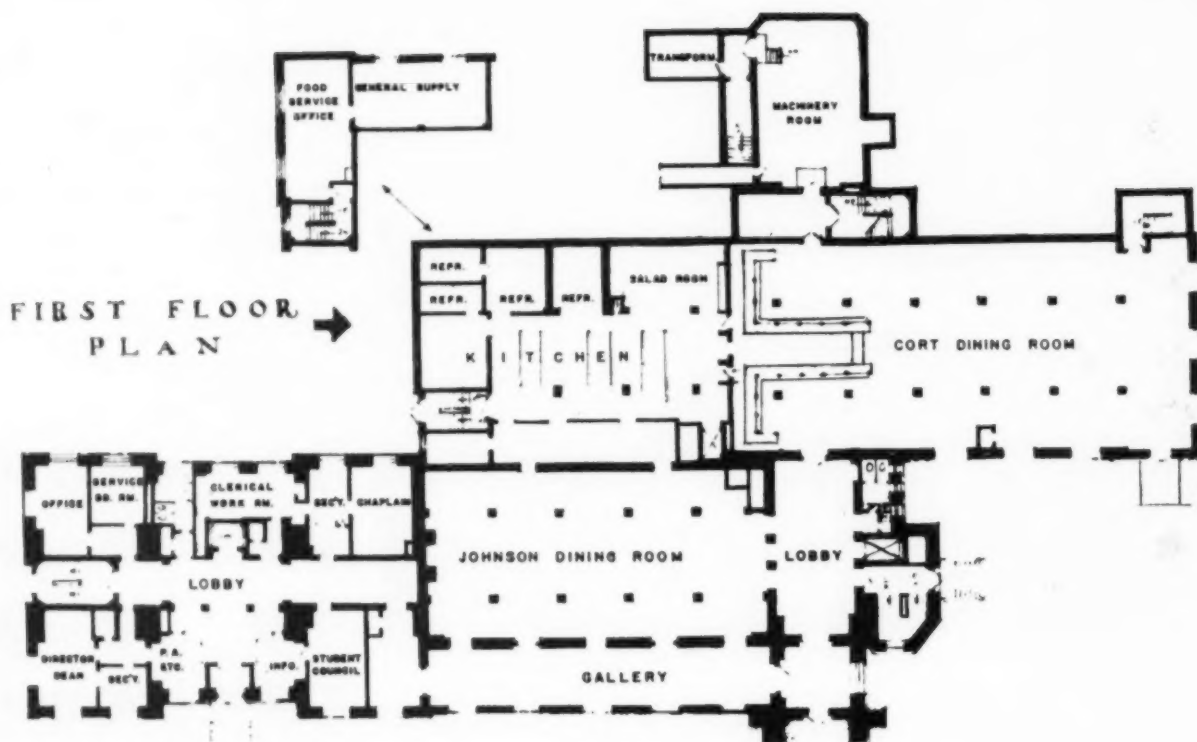
after remodeling.  
The room as previously  
used is shown in the  
small photograph below.  
It was registration time.

Packer Hall, the symbol of the young university  
in post-Civil War days, has resumed rightful  
importance on the campus and is again the heart  
of the university's social and cultural activities.



**CORRIDOR** added to the  
facade of the old building  
serves to display the university's  
collection of modern American  
paintings and connects various  
areas of the first floor.





new construction. The following year alumni, parents and friends donated \$350,000 for equipment and furnishings. The result is a University Center that has retained the familiar appearance of the old building but that has new additions so skillfully blended as to give a harmonious effect inside and out.

Five floors, once devoted to poorly lighted, crowded classrooms and offices, have been transformed into handsome dining areas, lounges, meeting rooms, and offices for the benefit of the entire student body and faculty, as well as visitors. Lehigh can now handle many different types of projects and social activities at one time under the one roof.

#### Self-Service Elevators

Further modernization included the use of rubber tile flooring throughout and installation of self-service elevators and of a public address system. The building is heated by oil and is completely air-conditioned.

Appropriate furnishings for this Victorian Gothic setting presented something of a problem. Thomas William Ulrichs of New York, who was in charge of decoration, has given the

student sections a cheerful, modern and thoroughly masculine atmosphere while maintaining an air of dignity and tradition in the faculty rooms.

To achieve this goal, he combined classic furniture design with contemporary fabrics and color patterns in a wide variety of textures. The result is a fresh, lively look that plays up the background in a new and striking fashion by emphasizing some of the distinctive details.

The main floor of the original structure now has an attractive lobby, information desk, student activities office, registration areas for meetings and conferences, and offices for the chaplain and associate dean of students. The remainder of the floor is devoted to the main kitchen and two dining areas for 1124 students.

The Johnson dining room, 45 by 85 feet, which accommodates 212 students at each meal, retains much of the original design. Three Gothic windows were retained in the north wall, and two others were converted into doorways leading onto the new arcaded gallery. The original woodwork and paneling around the huge fireplace were pickled, and the walls papered in soft green and white in a

modern pattern. Floor length draperies in bluish green, emerald green leather armchairs, and two pewter chandeliers complement the almost baronial setting while stressing a restful simplicity.

A new arcaded gallery, 15 by 85 feet, not only gives access to other parts of Packer Hall but also is utilized to display some of the university's growing collection of modern American paintings. It extends across the north front of the building with five ceiling-high Gothic windows repeating the pattern of those in the older sections. Buff walls and bamboo furniture upholstered in beige and gold give an air of warmth and light, well adapted to show off the paintings.

#### The Cort Room

A new larger dining area, 60 by 125 feet, known as "The Cort Room" has been provided. Like the Johnson Room, it is used exclusively by students on the contract dining plan; meals can be served to 350 students at one sitting. It has been decorated in a pleasant, informal style. The theme of pointed, small paned windows also appears in this new wing. It has white walls, short curtains printed in a geo-



metric pattern of orange, gray and vivid turquoise, and straight chairs covered with a textured plastic material in turquoise.

The second floor houses the central files of student organizations and provides 10 meeting rooms. The Pennsylvania Dutch snack bar, bookstore, hi-fi room, student lounge, and a room for cards and chess, form an ample, centrally located area for various recreational interests and activities.

Also on the old second floor is the John Wesley Grace student lounge. This area, 40 by 85 feet, contains large sofas, easy chairs, and convenient tables. A balcony affords a fine view of the city of Bethlehem.

The original oak wainscoting, dado, cornices and pillars were pickled to give a lighter and more cheerful look, but the color scheme is notable for its masculine quality. Draperies at the Gothic windows and the upholstery are done in a dark brown linen printed with a Persian hunt scene in vermilion red and peacock blue; the leather armchairs are in vermilion red or peacock blue, and the lamps have bases of old Oriental copper.

The Pennsylvania Dutch snack bar adjoins the lounge. Neighborhood history and customs were drawn upon for the decorations of this area, which accommodates 180 persons. Walls have beige wainscoting with the boards placed horizontally, and the furniture is in the same tradition. A

reproduction of a Pennsylvania Dutch antique chair was faithfully copied and a new stencil created, combining the traditional motifs with an "L" and "U" for Lehigh University.

A self-service bookstore was installed at one end of the new addition. A marked improvement over the previous store, it has four times more floor space so that it is now possible to make better displays and to carry a much larger stock of merchandise. Another new feature is the installation of three banks of mailboxes for the use of all undergraduates living in the university's residence halls.

The faculty lounge, a card and writing room, a private dining room, and the faculty dining room on the third floor of the original structure retain many of the earlier architectural features. The third floor of the new addition includes a completely equipped kitchen for service to the several dining areas on this floor, and two large multipurpose rooms that can be used for banquets, concerts, dances, lectures and recitals.

#### **Chapel Now a Dining Room**

One of the most interesting changes on the third floor was the conversion of the area initially used as the university chapel into the faculty dining room, named the Asa Packer Room. Conference banquets are held in this area. This space has been through several changes during its history: as a chapel

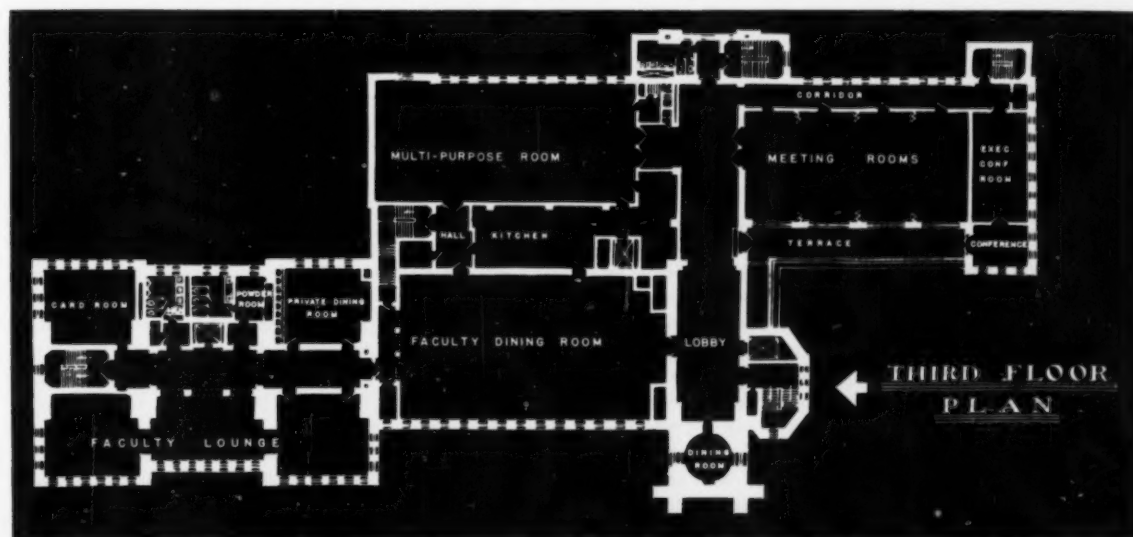
from 1869 to 1887, as a museum for 40 years, and later as offices, reading room, and classrooms.

The architect restored the original shape, 45 by 85 feet. The high vaulted ceiling has been painted vermilion red with oyster white ribbing. The old dark walnut wainscoting and small stained glass windows have been preserved, and the walls painted a warm beige. The room now seats 165 at well spaced round tables, with red leather armchairs.

The tower of the original structure has been transformed into a private dining room. The architect has given a small area elegance by installing carved mahogany paneled walls to make it round. The panels conceal practical cupboards for china and silver. The old windows still have their diamond shaped panes in pale mauve, green and buff. A luster chandelier, imported from Ireland, is suspended from the center of the tower. A specially designed green rug, bottle green damask draperies, a round mahogany table, and green leather armchairs add dignity.

The basement section of the original building, renamed the Richard Harding Davis Wing, houses the offices and studios of the campus radio station, the yearbook, and the student newspaper. In addition, there are locker and game rooms. The basement of the new wing contains kitchen storage and a pastry shop. ■

Old chapel became faculty dining room when Lehigh transformed ancient hall into a university center.





An architect gives . . .

## **A TIP ON A SURE WINNER**

### **AT 100 TO 1 ODDS**

**A**T LEAST \$10 million could be saved by a single college or a small university through application of only one element of a master plan!

This is a conservative, calculated statement that will be documented here. Yet colleges often budget only \$5000 or \$10,000 for this vital phase of capital improvement, which is potentially a gold mine. When they do, they never strike gold. They get a superficial "master plan" without real content. Why?

Virtually everyone is sold on the concept of having a master plan. The difficulty lies in the lack of definition of the work to be done, which would really pay off in the millions. It is so easy for the board to raise \$10,000 and for the architect simply to draw a plan of building blocks arranged in a reasonable, convincing relationship that the painful subject of a staff of consultants working for many months, following detailed specifications, and spending \$100,000 or more for salaries and other costs, is seldom ever discussed. Yet the expenditure of \$100,000 by one institution studied would pay off at better than 100 to 1 odds! What better tip on a sure winner could anyone want?

The answer lies in the integration of three phases of master planning: educational, time-spatial, and physical. They must be approached in sequence in that order with a unity of leadership and purpose if they really are to pay off. They are intrinsic parts of one study with one

goal, to bring the best educational opportunities to our society that our resources will permit.

The three phases of the study may be carried out by one properly qualified consulting organization under the direction of the board and the administration in close collaboration with the administration and the faculty. To be properly qualified the consulting firm must contain outstanding educators, architects and engineers. More commonly, the educational planning is done by the faculty. Sometimes the time-space studies are made by space efficiency experts, while frequently the architect experienced in this field includes them with his physical plan studies.

Most often, unfortunately, the first two phases are left to take care of themselves, and a modest sum is appropriated for a diagram of present and future buildings so that the board can say, "We have one."

The board may ask: "But what has educational planning to do with a master plan? We hire teachers to teach and they 'give' lectures to about 30 students at a time about nine times a week. Of course we need some laboratories and some large lecture halls. When we run out of space we'll build another classroom building — right there. What is an educational plan anyway?"

First of all, the educational plan defines aims and costs. One institution may choose to "cultivate the minds" of undergraduates without any refer-

ence to vocation. Another may choose to offer every graduate of high school in a certain area a course of study best suited to his ability and needs. Still another may play a limited, specialized role in agriculture or mining. Many variations and combinations lie between these extremes.

With well defined aims it is possible to project with reasonable accuracy the size and growth of the student body. The admission policy goes hand in hand with aims as an enrollment guide. The aims, of course, are essential as a basis for curriculum definition. The organization of the institution, the courses to be offered, and the enrollment, in turn, flow from the statement of aims applied to a survey of demand.

The educational plan also defines methods of instruction or learning. A college may be dedicated to the principle of discussion in tutorials or seminars, the lecture being completely excluded from its plan. Another may decide that lectures to large groups will permit high enough salaries so that the most talented faculty may be attracted.

Beardsley. Ruml in "Memo to a Trustee" points out that "unfortunately, classrooms in academic buildings, having been constructed to handle the recitation method, are ordinarily too small and are badly arranged for the lecture-discussion teaching method." Further: "Recitation sections are inappropriate in a course of study at college level."



**'Many institutions, established 30 years or more ago, have a splendid retainer known as superintendent of buildings and grounds. He has grown up with the place and intimately knows every foot of sewer and the idiosyncrasy of every mechanical facility on campus. He has the most phenomenal memory known to man. He supplements his remarkable intuition and experience and personal knowledge with a few scraps of partly legible diagrams and maps — "not to scale, of course." The only trouble: He retired last year and moved to Alaska.'**

**ROBERT E. ALEXANDER**

Robert E. Alexander, F.A.I.A. & Associates  
Los Angeles

In any event, the educational considerations that determine group size will be the most productive in shaping a master plan of efficient time-space organization. Not only the number and size of rooms will be determined by the educational plan, but the very shape and arrangement of facilities and the interrelationship of rooms and buildings as well.

The second phase of study relates the educational activities to time and space. Its objective is maximum efficiency of space use within limits imposed by good educational practice, time of faculty and students forecast, and reasonable flexibility or tolerance to accommodate changes in curriculum and enrollment. This quantitative efficiency is measured by class-hour use and student-station occupancy.

The first measure relates the hours per week a classroom is used to the hours it is available for use by the full-time day student and his instructors. The latter figure is usually eight hours a day five days a week, or 40 hours. If each lecture or seminar course meets three times a week at the same hour each day, and a day is always spaced between lectures for study, this permits a maximum of 24 hour use, an efficiency of 60 per cent. Staggered lunch hours or classes meeting twice a week or five times a week, as sometimes take place, would increase efficiency. Saturday morning classes, often reserved for a "safety factor," would make space available 44 hours a week, usable 36 hours by

classes meeting three hours each, for an efficiency of 82 per cent. Twenty-four to 36 hours per week, or an efficiency of 60 to 82 per cent, is surely attainable, although some tolerance for interim growth must be allowed for in a growing institution.

The second measure, student-station use, relates the seating capacity of classrooms used to occupancy in terms of percentage. A class of 40 meeting in a room containing 60 seats would have a student-station use of 66 2/3 per cent. It is obviously impossible to arrange a complex schedule of teachers, courses, hours and spaces in advance of registration and expect enrollment at the beginning of a term to match exactly the seats available in each case. Business machine methods and vastly improved communication may be used to increase efficiency through last minute reshuffling of space assignments, given a great variety of room capacities. A standard of 67 per cent has been recommended as an attainable objective for the university and state colleges of California by the California Restudy on Higher Education.

Yet how many institutions approach a class-hour use of 24 to 36 hours a week and a student-station use of two-thirds? One university studied used a hundred available classrooms an average of 11 hours a week and occupied student stations during those hours an average of 13 per cent!

What would a reasonable improvement mean in such a case in building

dollars? If only the class-hour use were doubled to 22 hours a week, all lectures could still take place Mondays, Wednesdays and Fridays. Saturdays would remain as sacred as Sundays. Yet the result would be like finding or adding a hundred new classrooms! At a conservative \$25,000 each, this move alone might be said to have a value of \$2½ million.

If in addition to doubling class-hour use the student-station occupancy were quadrupled to a modest 52 per cent, the hundred rooms would accommodate eight times as many students. In terms of space used at its original efficiency, this combination of improvements would have a value of \$10 million.

An expenditure of \$100,000 on these first two phases of the master plan alone would have paid off at the rate of 100 to 1!

In practice it is often difficult, but not impossible, to bring about such spectacular improvements in an established institution. Some classrooms may be so obsolete that they are never used at all. A careful analysis should be made to see if they can be remodeled successfully and economically. More often there is a great disparity between room sizes and class sizes, which results in an automatically low student-station occupancy.

In the subject case, more than three-fourths of all classes had 30 or fewer students enrolled, whereas less than a fourth of the classrooms ac-



# TIME-SPACE ORGANIZATION OF MODEL 1: A LIBERAL ARTS COLLEGE FOR 1800 STUDENTS

(Suggested by "Memo to a College Trustee," Beardsley Ruml and Donald H. Morrison)

	Number Rooms	Student Capacity	Average Occupancy	Courses/Semesters	Hours/Week	Course Registrations	Number Faculty
	1	300	200	10	30	2,000	3 1/3
	2	135	90	20	60	1,800	6 2/3
	2	90	60	20	60	1,200	6 2/3
	5	24	16	60	180	960	20
	6	15	10	70	210	700	23 1/3
	8	9	6	90	270	540	30
Totals	24	573	382	270	810	7,200	90
Average			66.66%		33.75 hrs.	4/stud.	1/20 stud.

commodated 30 or fewer students. Eleven per cent of the classrooms seated 70 or more students, yet only slightly more than 1 per cent of the classes required that size space. Unless the educational plan were revised to require more larger classes or the rooms were subdivided, the student-station use would remain low. Sometimes room shapes or other physical characteristics do not lend themselves to remodeling.

Class-hour use is usually low because of the human or organizational factors. Shortsighted planning may have neglected to provide suitable faculty offices, resulting in the practice of using classrooms themselves as "offices" or studies, restricting their use to courses given by the faculty "squatter." A college or department may have such a proprietary hold on an entire building that no other department may schedule a class within the sacred, off-limits portals.

Traditional uncontrolled faculty scheduling often produces great disparity between morning and afternoon use. There may be about four times as many morning as afternoon lectures and almost all laboratory classes may be scheduled for the afternoon. A specific directive from the trustees followed by strong administrative measures is usually necessary to implement improvements in this area of the master plan.

In planning a new institution higher efficiency is attainable. The first model of a liberal arts college for 1800 students suggested by Mr. Ruml in his "Memo to a College Trustee" could be housed in a mere 24 classrooms. One lecture hall seating 300 would average 200 occupants in 10 courses

meeting 30 hours per week, including two Saturday classes. Two rooms seating 135 would average 90 students in 20 courses; another 20 courses, averaging an enrollment of 60, would meet in two rooms seating 90 each. Two hundred twenty seminars, averaging 10 students each, would be conducted in 19 rooms of three different sizes. These 24 classrooms would be used an average of 33 1/3 hours per week and student occupancy would average two-thirds of capacity. A much closer tolerance between student stations and occupancy could be planned, of course, but the chart above permits ample flexibility.

## Third Phase of Plan

The third phase of the master plan study relates the educational and organizational plan as well as the time-spatial plan to a physical scheme. This phase alone, often in a most casual form, usually is referred to as "The Plan." If the plan is to have real content and validity, however, it must provide for the size and number of spaces called for by the time-space analysis. The shapes of the buildings themselves will be molded by the group size policy. The interrelationship of buildings will reflect the various curriculums. Such a plan should be a graphic generalization of a composite time-motion study of the activities of students, faculty and administration.

The elements of a physical master development plan I have discussed in another article\* in this magazine. In the category of sure bets, however, a factor of high potential return

\*Alexander, Robert E: Planning a Campus, Coll. and Univ. Bus. 26:33 (January) 1959.

deserves special mention because it is so often slighted. It is the simple housekeeping chore of compiling and maintaining "as built" records of property.

Just as the educational plan should begin with an appraisal of existing aims and methods, and the time-space study should start with an analysis of current space-use, the physical plan must be based on an inventory of all physical properties and their characteristics. This can be time consuming and costly, especially for an old institution. It should include plans of every building on the campus and a detailed topographic survey of every square foot of land to be included in the master plan. Every utility should not only be mapped but plotted as to size, elevation, capacity and load.

**Often this requires a survey crew working in the field for many weeks; but there is no "easy way," there is just a right way. Half measures won't do.**

In one recent case the contractor ran a deep sewer from a new building to an existing line shown on the plan; it turned out to be abandoned and filled with sand. In another, a new building would have been planned with several feet less excavation if the survey had included the entire campus. Just avoiding one such case would pay for a complete and accurate comprehensive survey. Once such a survey is made for an established campus, "as built" drawings on linen can be required as a part of every new contract. Microfilm copies may be made for a nominal cost and stored in a vault as the cheapest fire insurance. As a basis for future plans, this element also could pay off at the rate of 100 to 1.

But the real tip still remains the unity of the three phases: educational, time-spatial, and physical. A campus master plan is a means to an educational end. It seeks to attain the educational goals of a specific institution economically. It contains the past, present and future. It seeks to look ahead at least 20 years with hope and assurance, but cautiously provides for flexibility. At its best it gives noble form to the ideals and aspirations of the people who value the cloistered life of the devoted scholar on the one hand or the wide open department store of learning on the other. ■



# How Reliable Are Tax Rulings?

**Tax regulations are informative and useful,  
but they should be used with due caution**

**T. E. BLACKWELL**

Educational Management Consultant, Washington University, St. Louis

**L**AST month, we called attention to the fact that colleges are finding it essential to provide reliable tax advice to prospective donors. Furthermore, now that every employer is compelled to serve as tax collector for the federal government, college business officers must determine, at their peril, the tax status of every payment made to individuals.

As a result, business officers are, to an increasing degree, maintaining files of pertinent tax rulings. "It is the policy of the Internal Revenue Service to answer inquiries of individuals and organizations, whenever appropriate in the interest of sound tax administration, as to their status for tax purposes and as to the tax effects of their acts or transactions, prior to the filing of returns or reports as required by the revenue laws. Rulings are issued by the National Office of the Internal Revenue Service in Washington. The term, 'determination letter,' is used to describe a written statement issued by a district director of internal revenue."<sup>1</sup>

## Issue Warning

The Internal Revenue Service found it necessary to issue the following warning in a Revenue Procedure, published in the June 29, 1959, issue of the *Internal Revenue Bulletin*:

"Strict compliance with the rules set forth in Revenue Ruling 54-192 is required of taxpayers requesting rulings on prospective transactions. Particular attention is called to two provisions of the Revenue Ruling. One of these requires that, if a tax-

payer is contending for a particular determination, he must submit an explanation of the grounds for such contention, together with a memorandum of relevant authorities. The other provision of the Revenue Ruling to which attention is directed requires the submission, with the application for a ruling, of a complete statement of all the facts regarding the proposed transaction."

## Authoritative Publication

Many college business officers have found it worth while to subscribe to and scan each issue of the *Internal Revenue Bulletin*.<sup>2</sup> The cover of the *Bulletin* contains a summary of the tax rulings of the week. It is the authoritative publication of the Commissioner of Internal Revenue for the announcement of official rulings and procedures of the Internal Revenue Service, and for the publication of Treasury decisions, executive orders, tax conventions with other countries, legislation and court decisions pertaining to internal revenue matters. Except where otherwise indicated, published rulings and procedures apply retroactively.

Every issue of the *Bulletin* warns the reader that "revenue rulings and revenue procedures reported in the *Bulletin* do not have the force and effect of Treasury Department regulations, including Treasury decisions. No unpublished ruling or decision can be relied upon as a precedent in the disposition of other cases." Since even the published rulings represent

merely the conclusions of the commissioner or his subordinates as to the application of the law to the entire state of facts involved in a particular situation, they are not reliable guides to the law unless the facts and circumstances are substantially the same.

## Not the Final Word

Moreover, since tax regulations and rulings are merely expressions of opinion by administrative officials of what the law is or should be as applied to a given set of facts, they should not be accepted as the final word on the subject. Under our system of government, it is the function of the legislative branch to enact the law, that of the judiciary to interpret the law, and that of the executive to administer the law. In performing the function of administering the law, officers of the executive branch of the government must, of necessity, issue their own interpretation of the law. However, these administrative interpretations, known as administrative law, are always subject to judicial review and authoritative determination.

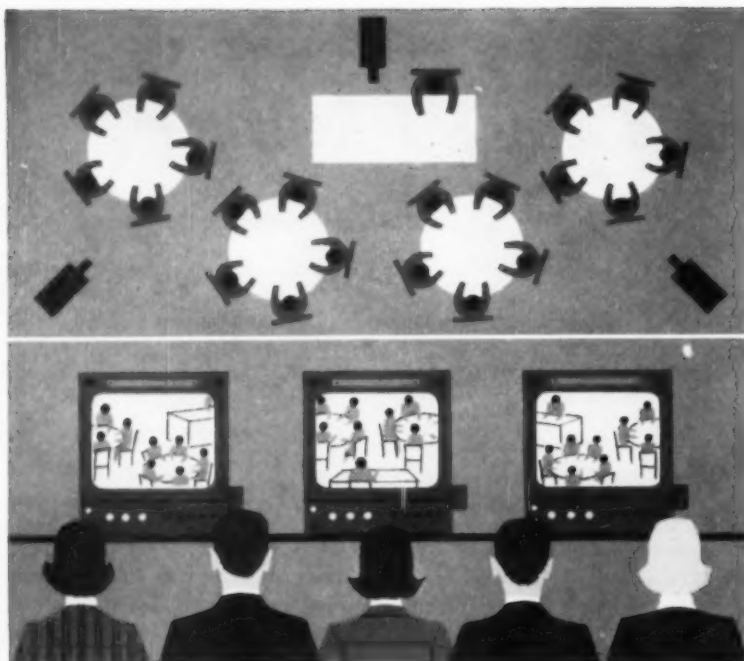
In addition to statutory law, enacted by Congress and the legislatures of the states, and case law, enunciated from the bench by judges, a multitude of administrative agencies of government issue regulations and rulings that have the compulsion of law until modified by statute or by the decision of a court of competent jurisdiction. Congress, by the enactment of tax codes and amendments thereto, determines the general structure of our system of federal taxation.

(Continued on Page 76)

<sup>1</sup>The quotation is from Revenue Ruling 54-174, published in the *Internal Revenue Bulletin* 1954-1, p. 394.

<sup>2</sup>The *I. R. Bulletin* is published weekly and may be obtained on a subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.





## Demonstration of Teaching Methods Facilitated by Closed-Circuit TV

Educators are well acquainted with the methods of instructing student teachers: actual visitation to elementary classrooms and observation of model classrooms from balconies equipped with one-way glass partitions. While both methods have advantages, there are also certain limitations or objections to each. Classroom visitations are distracting to elementary pupils and their teachers. Model classrooms with mezzanine observation points are very costly to construct, and also limit the area for observation.

Many colleges of teacher education are overcoming the basic problems of classroom observation through the use of Dage television systems. While the physical layout of educational buildings will determine to some extent the type of equipment and system to be used, the one as diagrammed above is symbolic.

Dage cameras cover the entire classroom area. Each of the cameras can be remotely controlled from the

observation room. In this room student teachers and their instructor observe the demonstration teaching on television receivers. Thus observation and interpretative discussion can go on without distracting classroom procedures.

As a pioneer in the field of ETV, Dage Television has worked closely with educators to develop a wide range of systems and equipment for educational purposes. The teacher training system is but one example. Each institutional requirement is treated as a special installation with the equipment system being customized to meet local need.

When considering your requirements for closed-circuit ETV, request the consultation of a Dage representative. He is well qualified to discuss and advise on all phases of ETV. Write for complete information about Dage television cameras and systems for every educational purpose. No obligation, of course.



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It is the duty of the Secretary of the Treasury and of the Commissioner of Internal Revenue to formulate tax regulations and rulings as their interpretation of the intent of Congress.

The more important of these regulations must be approved by the Secretary himself and are known as Treasury decisions. They are the only regulations considered by the Treasury Department to be binding upon its own actions. In point of law, no statement of any official of the Internal Revenue Service, oral or written, is conclusive and binding upon the Service except those contained in what is known as a Closing Agreement.<sup>3</sup>

### Regulations Are Informative

Tax regulations and rulings are informative and useful. However, they should be used with due caution. Only if they are read in the light of the Internal Revenue Code itself, and the authoritative interpretations of the code by the courts, can they be considered reliable guides to action. Judges frequently disagree sharply with the Commissioner of Internal Revenue.

However, the commissioner does not consider himself bound to follow the precedents established by the tax court and the other lower federal courts. The only decisions he is required to respect in the settlement of subsequent tax disputes are those of the U.S. Supreme Court. In other words, this administrative officer can compel the citizens of this country to litigate the same basic tax questions, time after time, until the issue has been settled by the highest federal court or by specific congressional action. Since the U.S. Supreme Court consents to review only a fraction of the tax decisions of the lower courts, many tax issues remain undetermined for years.

Of course, if the commissioner does not appeal a decision of a lower court, or if the U.S. Supreme Court declines to review a decision adverse to the commissioner, he cannot proceed further against the taxpayer with respect to the particular transaction. However, he may, and frequently does, continue to adhere to his own interpretation of the law with respect to other transactions, court decisions to the contrary notwithstanding. ■

<sup>3</sup>Internal Revenue Code of 1954, § 7121.





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# Putting the Shears to Red Tape in Purchasing

**G. EDWARD NEALAND**

Director of Purchasing  
Massachusetts Institute of Technology, Cambridge

VARYING degrees of red tape can be found in our institutions, most of it generated by people who are afraid that they will work themselves out of a job if they don't create enough routine to keep them busy. Before long, they become past masters at the art of doing things the hard way.

With the application of sound analysis, we should be able to make strides in the elimination of this red tape. It is not going to be eliminated overnight. To tackle the problem requires a good deal of patience.

Over and over again, we are reminded of the four fundamental functions of a purchasing department: (1) to buy the right quality; (2) to buy the right quantity; (3) to buy at the right price; (4) to buy at the right time. These factors guide us in our relationships with vendors, but how often do we sit back and apply the same principles to the internal operation of our office? I'd like to take time to do this now.

## Analyze System First

Before anything can be done to "put the shears" into operation, it is necessary to leave them right in the desk drawer until you have made a complete analysis of your system as it exists. Take this step by step in the order in which the materials are obtained.

1. What does a person at your institution have to do in order to make a request for the materials? What kind of a form does he have to fill

out? How many approvals are required before the purchasing department has authority to go ahead with a commitment to a vendor? Are these approvals really necessary, or could they be eliminated in whole or in part?

## Penny-Wise and Dollar-Foolish

A good example of this existed in my own institution where a department head required each member of his staff to submit every requisition regardless of its dollar value to his office for approval before any action could be taken by the purchasing department. By sitting down with this department head and analyzing the situation, I found it not difficult to convince him that he was being penny-wise and dollar-foolish. This procedure has now been revised so that requisitions under \$50 can be processed without his prior approval. Whereas there used to be delays of two or three days between the time the requisition was made out and the time it reached the purchasing department, it is now possible for a requisitioner to deliver the requisition directly to the purchasing department and get immediate action.

How many copies are made of your purchasing requisition? What function is served by each of the copies? Would it be possible to have fewer copies, letting one copy serve more than one function? Does your requisition serve both internal and external purchases?

A few years ago we had as many as five and six types of requisition forms depending upon the source of

material — laboratory supplies, chemical stores, office supplies, central duplicating service, photographic service, building and grounds department, and so forth. After study, we were able to reduce our requisitions to one standard form. If it is used on internal services, it also serves as the charging document.

2. How about your purchase order form? Is it printed with all the information that applies to every order in order to eliminate the same information being typed over and over again? How many copies are there? Could one copy serve multiple uses? Are you using window envelopes for mailing?

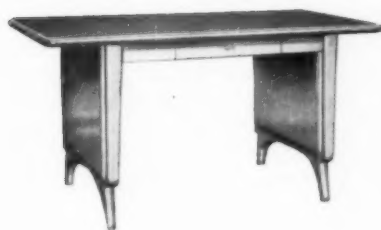
3. What is the nature of your receiving report? This will depend on the method of receiving. In our case, the goods are received in the central receiving room where the receiver makes note of only the number of packages received from the vendor, then delivers the goods intact to the requisitioner, who, when he opens the packages, makes note of the quantity against his copy of the purchase order. No formal receiving form is made out at this time.

## Extra Copies Mean Extra Work

4. The requisition has been made, the purchase order has been sent to the vendor, and the goods have now been received. The next step is the handling of the vendor's invoice. How many copies of the invoice do you require? This situation should be analyzed and the minimum number requested from the vendor. The more copies requested, the more paper han-

From a paper presented at regional meetings of the National Association of Educational Buyers.





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ding there will be within your organization. Analysis should be made of the steps through which the invoice goes before payment can be made. How many approvals are required? Does this take so long that you are losing cash discounts?

For nearly three years we have been operating under a system that seems to be working very well with a minimum of paper work. We request the vendor to supply invoices in triplicate. This gives us one copy for our purchase order file, one for the requisitioner's file, and one for

our accounting office file. By the use of an approval stamp, which is applied to the original copy of the invoice in the purchasing office, we are able to put all the information on it that is required for payment by the accounting office.

The first step is an approval for unit price by the purchasing department; the second, an approval by the requisitioning department indicating that the goods have been received and are of satisfactory quality and quantity. This is done in lieu of a separate receiving report. After ap-

proval by the department, the invoice is sent to the accounting office, where it is checked for the correctness of extensions and totals, at which time it is ready for payment.

We didn't accomplish this in a matter of a week, a month, or even a year. After we had made a complete study of our existing methods in paper work, it was then necessary to gain the cooperation of most of the departments in our attempt at simplification. This is not always easy. Regardless of all of the sound reasons for elimination of paper work it is hard to convince people that they should do things differently than they have been doing for the last 20 or 30 years.

In some cases it became necessary for me to sit down with the department head and review his methods of accounting for his budgetary allowances in order to show him how a simplified system would actually simplify his own operations.

#### Need Superior's Support

The first and most important cooperation that is required is the wholehearted backing of your superiors to want to see something accomplished. Without this it is really difficult to make any progress at all. Sooner or later you will have to go ahead, knowing that 75 or 80 per cent of the people are satisfied with the new procedure; the remainder will have to follow along.

In purchasing for educational institutions, we are service departments to engineers, scientists, educators. Most of these people resent paper work, so the more we can eliminate the better our relationships with them will be. On the other hand, we have the administrative departments, particularly accounting, which is more inclined to want a lot of paper work and fails to appreciate the point of view of the faculty. Our institutions exist for the purpose of educating, not for record keeping. Everything that we do in addition to teaching and research is of a service nature to accomplish that end.

To eliminate red tape you have to have a definite policy and procedure in printed form so that everybody will know what it is. No two schools can be expected to use the same policy and procedure. Each purchasing agent will have to tailor procedures to the peculiarities of his own institution.

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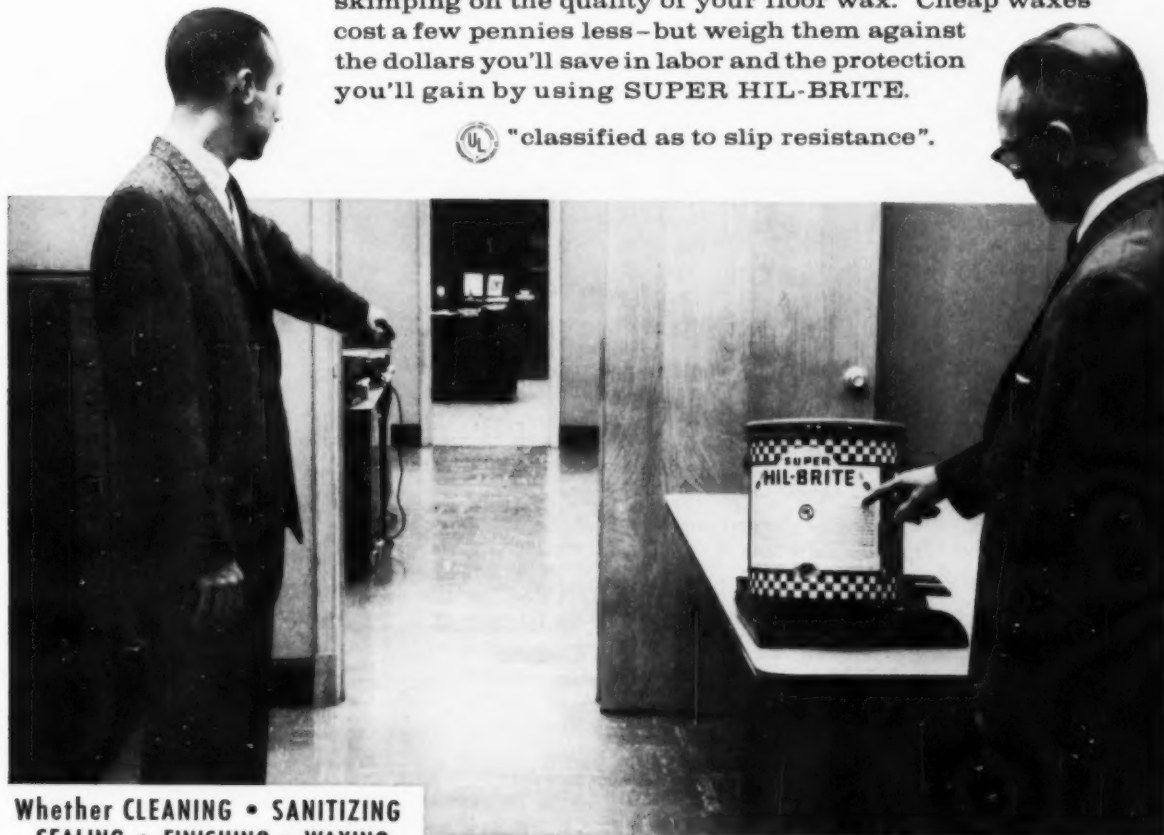
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# What's Ahead in College Food Service?

**An industrial engineer and an authority on student feeding considers sound food management methods, improved utilization of labor, and careful control of all costs involved**

## **JOHN W. STOKES**

John W. Stokes & Company  
Food Management Consultants, Boston

**L**AST month we discussed current trends in cafeterias, ways of reducing bottlenecks in the cafeteria line, prepackaged food items, and new materials and equipment for college food service.

### **New Methods of Cooking**

Whether the food is served at tables or in the cafeteria, increasing attention is being given to preparation and cooking in school and college food services. The use of labor saving machinery has greatly increased.

The trend in large institutions is to do more cooking in ovens and steam cookers than on the conventional ranges. Greater attention is being paid to low-temperature cooking, particularly of meats. This reduces shrinkage and makes for more succulent and appealing meat dishes. Vegetables are being cooked in smaller quantities at more frequent intervals.

A distinct trend is the effort being made in many food services to shorten the time between the end of the cooking process and the time of service. By avoiding long periods of storage in the steam table, the food is kept from being overcooked and dried out. This prevents the leaching out of vitamins and valuable nutrients and makes for better quality and eye appeal.

### **New Types of Foods Available**

Years ago many school food services made their own ice cream and operated a bakery and a butcher shop as well. Today ice cream is generally purchased in prepackaged portions. Bread, pies, cakes and other baked goods are bought from outside bakers. In many areas, meats, rather than being purchased in carcasses or quarters, may be more economically ob-

tained in proportioned cuts. These new practices not only save labor but make for more effective portion control and minimize waste.

The lowly potato may now be obtained already peeled, cut into shapes for French fries, diced or in dried flakes for instant use as mashed potatoes. Prepared mixes for breading or for waffles, doughnuts, cakes, rolls or muffins are widely used. The condiments, such as dressings, ketchup, mustard, sugar, salt and pepper, and jellies, may be obtained in individual packages.

Hotel and restaurant blends of soluble coffee in individual, 12 cup or 50 cup aluminum foil envelopes have found a ready market in school food services. It makes a uniform product, saves about 10 per cent of the brew absorbed by the grounds, and is said to save 75 per cent of the coffee preparation labor. Instant hot chocolate in individual and larger sized packages, as well as instant tea, is also on the market.

The quality of canned fruits and vegetables has greatly improved over the years, and frozen fruits and vegetables are in almost universal use. The labor saved in using frozen peas, for example, more than offsets the differential involved in shelling and preparing the fresh grown product. Many users also find advantages in frozen peas over the canned variety with respect to quality and appearance.

Changes in growing areas and transportation facilities make many fresh fruits and vegetables, strawberries and corn on the cob, for example, available almost all the year-round.

Bananas and citrus fruits, once regarded as delicacies, are readily available throughout the year. Citrus juices

in fresh or frozen form are also delivered regularly to most food services.

### **Attention to Cost Control**

Confronted by the increasing costs of food and labor owing to the inflationary spiral of recent years, administrators of school and college food services have been forced to pay greater attention to methods of cost control.

To illustrate: The saving of only 1 cent per meal, in an institution serving 1000 meals a day, aggregates more than \$3600 annually. Food cost-control systems make possible savings in such functions as purchasing, receiving, storage, food preparation and cooking, portion control, menu planning, internal food ordering, employees' meals, and accounting for cash. They bring to light waste, pilferage and other losses that unnecessarily increase the food budget.

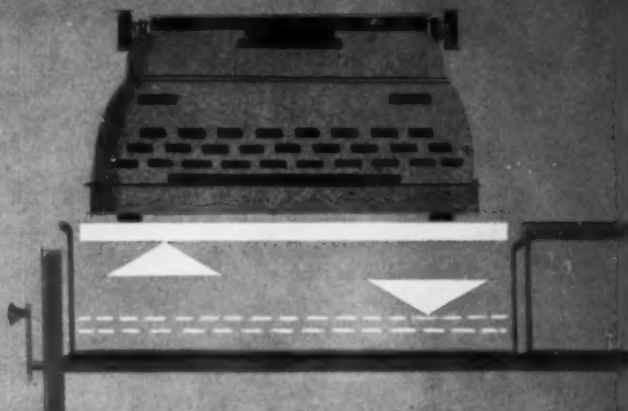
Labor utilization starts with the planning of the food service so that food and supplies pass through the various departments in a direct flow with a minimum of backtracking. Equipment is laid out so that kitchen and service employees do not have to take unnecessary steps in performing their daily tasks. It has been demonstrated that it costs 1 cent for every 132 feet walked by a food service employee who is paid \$1.20 per hour (at the average rate of 3 miles, or 15,840 feet per hour). Where higher wages and fringe benefits exist and when coffee breaks, rest periods, trips to the washroom, and other lost time are taken into account, the cost for the average food service employee is 2 cents or more per hundred feet.

In surveying the food service of a large southern university, we found



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that an adequate food cost control system and improved labor utilization could save some \$52,000 annually in operating costs. It is no paradox to point out that such controls would also result in improved food quality and service. When such controls exist greater attention is paid to all details of the operation by supervisory and administrative staffs.

#### Use of Consultants

Mounting costs have made it profitable for school and college business managers to make use of outside food

management consultants in the planning and operation of their food service. While the services of a competent architect are essential, the architect, however skilled, cannot be expert in food service problems. Equipment dealers may aid with layout suggestions. The real need, however, is for counsel from a person experienced in food service operations.

Often too much attention is given to a surfeit of shiny stainless steel equipment and the beauty of the dining room decor. Too little attention is given to laying out the kitchen and

serving areas for efficient operation *after the building is completed*. As a result, operating costs may be unnecessarily high and food service and quality not so good as it should be. Once the plumbing and utility lines are set in concrete, it is costly, if not prohibitive, to make changes. The solution lies in having the food service layout carefully checked before construction starts by a consultant who can give objective and impartial counsel based on practical experience.

I visited a beautiful new college cafeteria and, to cite only one of the many obvious errors in planning, the cook's worktable was placed so far from the ranges that it was necessary for him to travel many hundred extra feet daily in the course of his work. Not only is this costly, but a poor layout makes it difficult to keep competent employees.

#### Sanitation and Safety

Outbreaks of communicable diseases and food-borne contamination have brought about higher standards of sanitation in school and college food services in recent years. If casual customers of a public eating place are made ill by food contamination, the chances are that, being strangers, they will have no opportunity to compare notes and to attribute the cause to the eating place. If patrons of a college food service, who rely upon it for meals day after day, become ill, the unfortunate happening is likely to be widely publicized. Actually restaurants are subject to rigid periodical inspection by public health officials in most communities. Responsible restaurant and school food service managers strive for the highest standards and go beyond the letter of the law in maintaining sanitary practices.

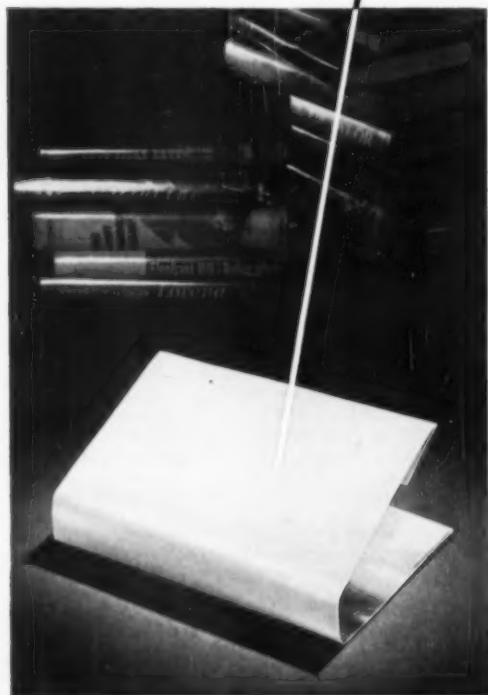
However, it is becoming recognized that cleanliness of food service quarters and equipment, freedom from vermin and rodents, practical sterilization of dishes and food equipment, and proper refrigeration and handling of perishable foods are not sufficient. The crux of the problem is the constant training and supervision of food service employees with respect to personal cleanliness. Applying the words of the late President Hyde of Bowdoin College, with respect to food service sanitation, "Anything short of the best is bad."

More emphasis is being placed upon safety in food services these days, largely through the educational pro-

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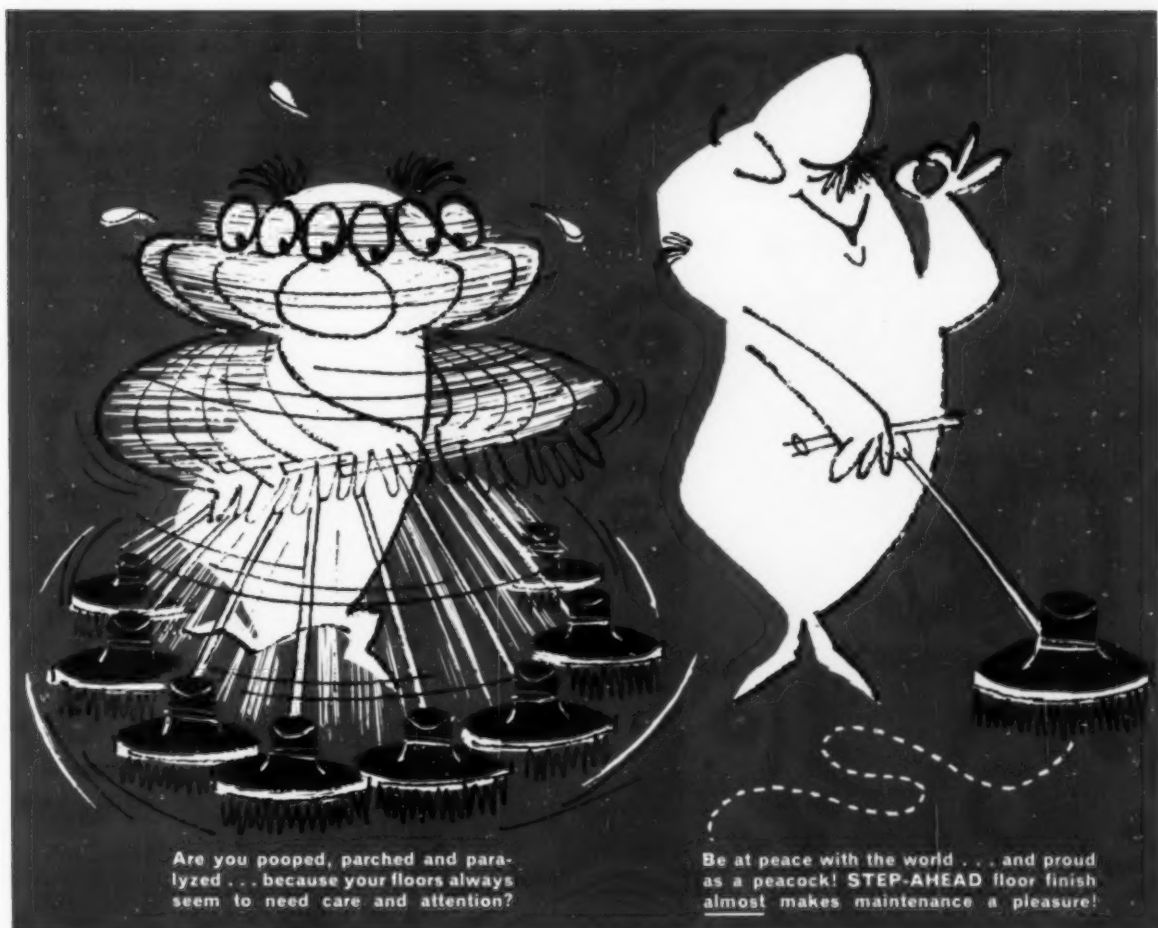


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grams carried on by the National Safety Council and by the liability insurance companies. Some of the steps being taken are: prompt first-aid treatment of cuts and burns to prevent infectious sores; prevention of conditions causing falls and accidents; elimination of the possibility of foreign substances finding their way into food; guards on moving parts of machines; frequent cleaning of exhaust flues over cooking appliances, and provision of movable grease filters that can be readily cleaned to prevent grease fires. In the last analysis safety depends upon training and supervision.

### Changes in Fee Structure

In many schools it had long been customary to include the cost of meals in the charge for board. Students have paid a flat fee, usually per semester, whether or not all meals paid for were consumed. In recent years this policy has been changed in many institutions so that students pay only for meals purchased, usually in the cafeteria.

While more democratic and economical from the student's point of view, this change has posed problems for the food service management. Yet, like all innovations, it provides a challenge for improved food and service and better merchandising.

### Outside Contractors

In most secondary schools and colleges, the food service long has been in the hands of the school management itself. In recent years there has been a marked increase in the number of school food services operated by outside food service contractors, usually on a management fee basis, 5 per cent being common. Many of the large industrial caterers have turned to the school field.

### Summary

In boarding schools and colleges where the food service supplies three meals daily, there is the responsibility for serving meals that are appealing and well balanced nutritionally to students, faculty and staff. Current advances in nutritional science and the growing variety of foods available, together with new types of service and modern equipment, make this a fascinating and challenging opportunity for those in charge of school feeding. Coupled with this is the necessity for sound food management methods, improved utilization of labor, and careful control of all costs involved. ■



# NEWS

**California Ends Student Control of Athletics . . . Oberlin Reduces Loan**

**Rate To Match Government's . . . Michigan Hopes To End Discrimination in**

**Off-Campus Housing . . . Ohio State Urges Summer Entrance for Freshmen**

## **Government Loan Rate Matched by Oberlin**

OBERLIN, OHIO. — Oberlin College has revised its student loan program to offer funds at 3 per cent interest annually. President Robert K. Carr has announced. The new rate, a reduction from rates that have ranged up to 6 per cent, is effective July 1.

President Carr also announced that the present maximum loan equivalent of three semesters' tuition will be changed to four semesters equivalent, "thereby giving the several scholarship committees and the loan committee greater latitude in allocating student aid between scholarships and loans."

The college estimates that total loans to students for 1959-60 will amount to about \$125,000, and that the 1960-61 total will be somewhat larger, principally because of increased tuition charges. Tuition at the college of arts and sciences and the conservatory of music will be \$1150 annually, beginning next year.

Oberlin's more liberal loan rate will now match that offered by the federal government under the National Defense Education Act of 1958. Oberlin was one of numerous colleges and universities to withdraw from the student loan program because of the objectionable "disclaimer affidavit" required of participants.

## **Faculty Gets Pay Hike and Retirement Benefits**

WASHINGTON, PA. — A general increase in salaries at Washington and Jefferson College has been announced by President Boyd C. Patterson. The increase, ranging from 8 to 15 per cent, is the third major one in the last five years. Based upon rank, merit and length of service, it will become

effective July 1. Additional retirement benefits are also provided.

The pay raise will add about \$50,000 to the college's annual budget of \$1,250,000. Funds for the pay hike will come partly from an increase in tuition charges and partly from endowment income and contributions.

## **Kenyon Discontinues All Preprofessional Programs**

GAMBIER, OHIO. — President F. Edward Lund of Kenyon College announces that by action of the faculty all preprofessional programs will be discontinued at the end of the present academic year. Affected by this decision are the premedical, prelaw and science-engineering curriculums.

"This action indicates a further realization of Kenyon's radical faith in the liberal arts. Perhaps it will also serve as an answer from one quarter to the critics who charge that the liberal arts colleges are becoming vocational," President Lund declares.

The premedical curriculum, started in the spring of 1940, has been one of the strongest special programs at the college. About 98 per cent of recommended majors have gone on to the best medical schools in the country during this period. A recent survey of the last five graduating classes indicates that 30 per cent of premedicine students have won highly competitive medical school scholarships.

A few years ago, Kenyon adopted a diversification plan that in many ways satisfies the original aims of its preprofessional programs, especially the program in premedicine. Prof. Charles S. Thornton, chairman of the biology department, observes that "the present college curriculum, with its enlightened diversification requirements, has made the premedical curriculum outmoded."

## **Athletic Control Plan for California Campuses**

BERKELEY, CALIF. — Direct administrative control of intercollegiate athletics on the Berkeley and Los Angeles campuses of the University of California will be transferred on July 1 from the students to the chancellors. President Clark Kerr announced recently.

A university department of intercollegiate athletics, operating as an auxiliary self-supporting enterprise, will be established under the chancellor of each campus in accordance with a plan developed jointly by Chancellor Glenn T. Seaborg of the Berkeley campus and Vice Chancellor William G. Young, acting for Chancellor Vern O. Knudsen of the Los Angeles campus.

President Kerr said he was particularly gratified that all segments of the university community on each campus had assisted in the development of the plan and that it had received such broad support.

"With the development of this plan," he stated, "I believe we have achieved our major objectives: (1) an athletic policy that will be consonant with the educational objectives and ethical ideals of the university, and (2) a program with such broad support that it can be applied uniformly with success on both campuses."

President Kerr said he concurred in the four reasons Chancellor Seaborg and Vice Chancellor Young gave for recommending the change from student to university control:

1. The present form of organization is inconsistent with final responsibilities of the chancellor, president and regents, and has been unnecessarily cumbersome.
2. The effective policy roles of stu-

(Continued on Page 92)





Photo courtesy of Mel Warshaw, Inc., Miami (creators of Jay Originals and Trend-Setter fashions)

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In most secondary schools and colleges, the food service long has been in the hands of the school management itself. In recent years there has been a marked increase in the number of school food services operated by outside food service contractors, usually on a management fee basis, 5 per cent being common. Many of the large industrial caterers have turned to the school field.

### Summary

In boarding schools and colleges where the food service supplies three meals daily, there is the responsibility for serving meals that are appealing and well balanced nutritionally to students, faculty and staff. Current advances in nutritional science and the growing variety of foods available, together with new types of service and modern equipment, make this a fascinating and challenging opportunity for those in charge of school feeding. Coupled with this is the necessity for sound food management methods, improved utilization of labor, and careful control of all costs involved. ■



# NEWS

**California Ends Student Control of Athletics . . . Oberlin Reduces Loan Rate To Match Government's . . . Michigan Hopes To End Discrimination in Off-Campus Housing . . . Ohio State Urges Summer Entrance for Freshmen**

## **Government Loan Rate Matched by Oberlin**

OBERLIN, OHIO. — Oberlin College has revised its student loan program to offer funds at 3 per cent interest annually, President Robert K. Carr has announced. The new rate, a reduction from rates that have ranged up to 6 per cent, is effective July 1.

President Carr also announced that the present maximum loan equivalent of three semesters' tuition will be changed to four semesters equivalent, "thereby giving the several scholarship committees and the loan committee greater latitude in allocating student aid between scholarships and loans."

The college estimates that total loans to students for 1959-60 will amount to about \$125,000, and that the 1960-61 total will be somewhat larger, principally because of increased tuition charges. Tuition at the college of arts and sciences and the conservatory of music will be \$1150 annually, beginning next year.

Oberlin's more liberal loan rate will now match that offered by the federal government under the National Defense Education Act of 1958. Oberlin was one of numerous colleges and universities to withdraw from the student loan program because of the objectionable "disclaimer affidavit" required of participants.

## **Faculty Gets Pay Hike and Retirement Benefits**

WASHINGTON, PA. — A general increase in salaries at Washington and Jefferson College has been announced by President Boyd C. Patterson. The increase, ranging from 8 to 15 per cent, is the third major one in the last five years. Based upon rank, merit and length of service, it will become

effective July 1. Additional retirement benefits are also provided.

The pay raise will add about \$50,000 to the college's annual budget of \$1,250,000. Funds for the pay hike will come partly from an increase in tuition charges and partly from endowment income and contributions.

## **Kenyon Discontinues All Preprofessional Programs**

GAMBIER, OHIO. — President F. Edward Lund of Kenyon College announces that by action of the faculty all preprofessional programs will be discontinued at the end of the present academic year. Affected by this decision are the premedical, prelaw and science-engineering curriculums.

"This action indicates a further realization of Kenyon's radical faith in the liberal arts. Perhaps it will also serve as an answer from one quarter to the critics who charge that the liberal arts colleges are becoming vocational," President Lund declares.

The premedical curriculum, started in the spring of 1940, has been one of the strongest special programs at the college. About 98 per cent of recommended majors have gone on to the best medical schools in the country during this period. A recent survey of the last five graduating classes indicates that 30 per cent of premedicine students have won highly competitive medical school scholarships.

A few years ago, Kenyon adopted a diversification plan that in many ways satisfies the original aims of its preprofessional programs, especially the program in premedicine. Prof. Charles S. Thornton, chairman of the biology department, observes that "the present college curriculum, with its enlightened diversification requirements, has made the premedical curriculum outmoded."

## **Athletic Control Plan for California Campuses**

BERKELEY, CALIF. — Direct administrative control of intercollegiate athletics on the Berkeley and Los Angeles campuses of the University of California will be transferred on July 1 from the students to the chancellors, President Clark Kerr announced recently.

A university department of intercollegiate athletics, operating as an auxiliary self-supporting enterprise, will be established under the chancellor of each campus in accordance with a plan developed jointly by Chancellor Glenn T. Seaborg of the Berkeley campus and Vice Chancellor William G. Young, acting for Chancellor Vern O. Knudsen of the Los Angeles campus.

President Kerr said he was particularly gratified that all segments of the university community on each campus had assisted in the development of the plan and that it had received such broad support.

"With the development of this plan," he stated, "I believe we have achieved our major objectives: (1) an athletic policy that will be consonant with the educational objectives and ethical ideals of the university, and (2) a program with such broad support that it can be applied uniformly with success on both campuses."

President Kerr said he concurred in the four reasons Chancellor Seaborg and Vice Chancellor Young gave for recommending the change from student to university control:

1. The present form of organization is inconsistent with final responsibilities of the chancellor, president and regents, and has been unnecessarily cumbersome.

2. The effective policy roles of stu-

(Continued on Page 92)



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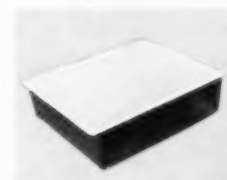
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(Continued From Page 89)

dents, faculty and alumni will be enhanced.

3. The educational values inherent in intercollegiate athletics can be better nurtured under the new program.

4. Continued operation of non-athletic activities by the students will not be jeopardized by the change, since these activities are not dependent upon athletic income.

The new department of intercollegiate athletics will operate in the same fashion as other auxiliary enterprises of the university—the residence and dining halls and the parking service, for example—and will derive its support from receipts from athletic contests.

The executive head of the department on each campus will be known as the intercollegiate athletics director and will be responsible to the chancellor.

In order that there be an opportunity for expression of views of faculty, students and alumni, each chancellor will appoint a 12 member intercollegiate athletic advisory board to include four faculty members, four students, three alumni, the campus business manager, and the intercollegiate athletic director.

The board will advise the chancellor on such matters of policy as the chancellor deems appropriate—for example, finances, personnel and scheduling.

President Kerr made it clear that the Associated Students will continue to administer nonathletic activities on both campuses and named as examples the student unions and the student newspapers. The physical plant and equipment for athletics, however, will be transferred on July 1 from the student association to the university.

An equitable division of assets will also be made between the new university department and the Associated Students.

### Traffic and Security Directors Meet in June

EVANSTON, ILL. — The National Association of Traffic and Security Directors will hold its second annual meeting on June 23 to 25 at Northwestern University, under the direction of Frank M. Andrews.

An informal meeting was held in 1958 with 12 members representing eight schools. These 12 members





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voted to form a national organization. From this nucleus, an organizational meeting held at the University of Houston was attended by 34 members from 30 schools located in 18 states.

The purposes of the association are:

1. To promote the common interest in the administration, operation and development of university and college security, police and traffic departments.

2. To foster good administration of planning and development, operation and maintenance of security, police

and traffic departments through national meetings.

3. To promote professional ideals and standards to better serve the educational objectives of institutions of higher learning.

### Substitutions Made in R.O.T.C. Programs

STANFORD, CALIF. — Stanford University will be among the first in the U.S. to revitalize its air force and army R.O.T.C. programs by substituting regular university courses for

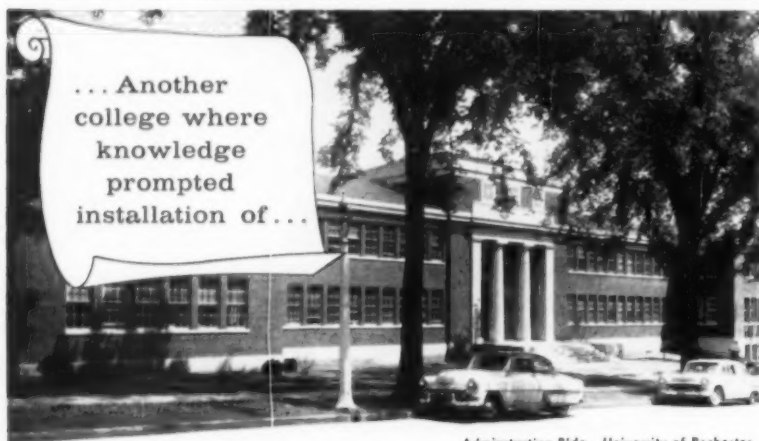
military courses taught by military instructors.

Beginning next fall, the Air Force Reserve Officer Training Corps program will substitute regular international relations and political geography courses for comparable courses formerly taught by the air force. Both the army and the air force anticipate substituting other university courses for blocks of their present curriculum later.

Lt. Col. Karl S. Gamber, commander of Stanford's air force detachment, described the changes as part of a nationwide reorientation of the program.

"Complete acceptance and support of the air force's revised program by Stanford University administrators have made it possible for Stanford to be among the first in the nation to implement this new program," Col. Gamber said.

Courses for which no university counterparts exist will continue to be taught by military instructors. Requirements include Stanford courses, R.O.T.C. courses, and one hour of military drill formation each week during the four-year academic program.



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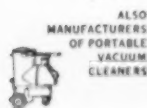
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### U-M Studies Steps To End Discriminatory Practices

ANN ARBOR, MICH. — The University of Michigan has created a committee to recommend policies and practices to fulfill the regents' anti-discrimination by-law as it relates to off-campus housing.

The six-member committee received the assignment from James A. Lewis, vice president for student affairs.

The November 1959 by-law says the university shall not discriminate because of ancestry, race, color, religion, creed or national origin, and shall direct its officials to work for the elimination of discriminatory practices where students and employees are involved.

The committee will decide where the by-law is applicable, and study steps to end discrimination against students and employees in commercial off-campus housing units. Recommendations will correspond with "the effective powers and available resources of the university and community agencies," the committee states.

Titled the "committee on discrimination in off-campus housing," the



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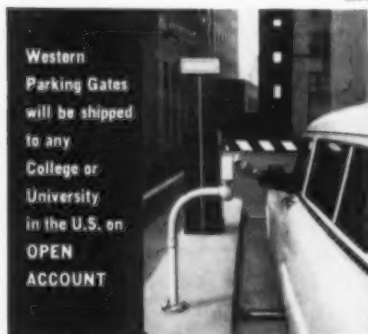
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group is holding weekly meetings. Members are: Elizabeth M. Davenport, assistant dean of women; Prof. Eleanor G. Cranfield of the school of social work, faculty representative; William G. Cross, assistant dean of men; Dr. Ralph Gibson of the Ann Arbor Human Relations Council, and Ellen Lewis and James K. Seder, student representatives.

Vice President Lewis is an ex-officio committee member without vote.

### Ohio State Urges Summer Entrance for New Students

COLUMBUS, OHIO. — Ohio State University wants to "sell" more high school seniors on the idea of beginning their university work this summer, rather than waiting until fall.

On March 15 the university sent a poster and an accompanying letter to every Ohio high school, announcing an enlarged and modified offering of summer courses and pointing out the advantages of early enrollment.

The effort is in line with President Novice C. Fawcett's expressed aim of aiding both student and university by encouraging summer entrance.

The poster lists among summer opportunities: wide selection of basic courses, complete counseling and guidance services, preferred housing in campus residence halls, special remedial courses, air conditioned classrooms for many classes, recreational facilities, and concert and lecture programs.

The accompanying letter addressed to the high school principal said: "We are confident that we can challenge your most able students and, at the same time, provide for the need of those who may require special guidance, counseling and instructional services. In this way we hope to utilize our university facilities most effectively and to help prepare students for regular university work at the opening of the autumn quarter."

### Ford Grants \$100,070 to Wayne for TV Courses

DETROIT. — The Ford Foundation has approved a grant of \$100,070 to Wayne State University for instruction by television.

The grant will be used to pay the salaries of the eight professors who will participate in the program of



### New Overly Fire Barrier with Panic Hardware ends safety compromises

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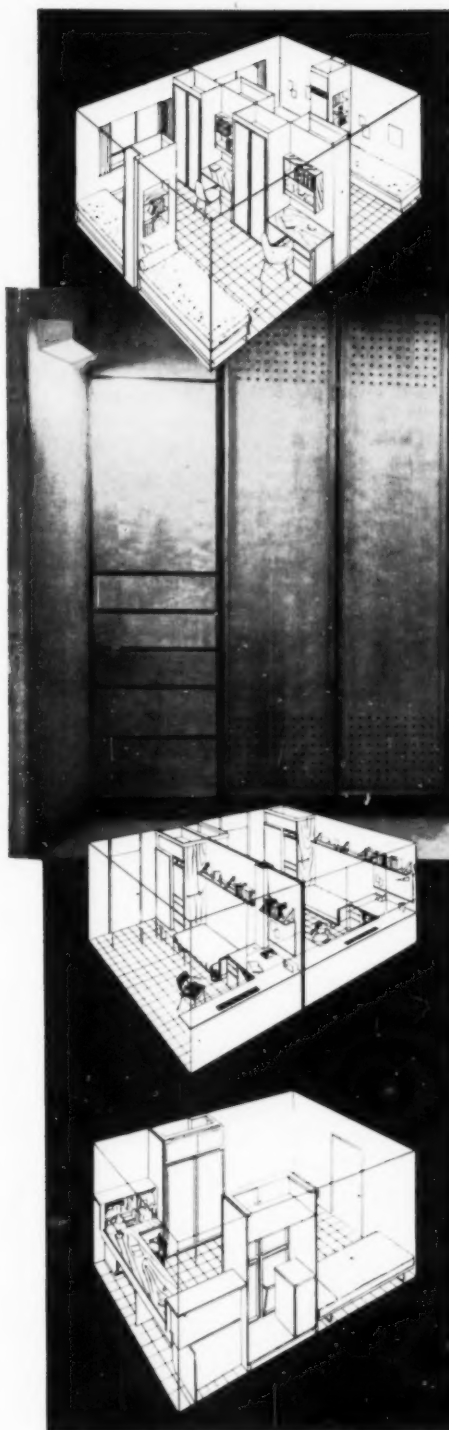
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instruction. Four closed-circuit courses will be offered by the college of liberal arts and four by the college of education this fall.

The television courses will be done on video tape. At the end of the fall semester, all will be evaluated, modified and rerecorded in order to ensure the highest possible quality of instruction.

The courses will be presented over closed circuit into university classrooms. It is planned to present each lecture at least three times each week to permit maximum registration. The

university now has three rooms for this purpose and four more will be converted.

The professors who will participate in the program will be employed on a 12 month basis.

### Annual Fund Raising Workshop July 18 to 29

STATE COLLEGE, PA. — Dollar support from private sources for colleges, universities and secondary schools is becoming increasingly necessary with rising costs and bulging enrollments.

College presidents, administrative officers, and fund directors are seeking increased funds through better organization and improved methods. To this end, the thirteenth annual Workshop in Fund Raising will be offered at the Chautauqua Center of Syracuse University at Chautauqua Institute, July 18 to 29.

The course will deal with the fundamentals of educational support: What policies encourage support? Why do people give? What are the techniques of raising money? What are the best methods of organizing and soliciting funds for education?

Since its beginning, as the first fund raising workshop in the country, the course has been under the direction of Bernard P. Taylor, former consultant in educational fund raising and now executive director of the Penn State Foundation at the Pennsylvania State University.

### No U-I Approval for Bias Rooming Houses

URBANA, ILL. — The University of Illinois will approve no new privately operated student rooming house unless the owner agrees to make its facilities available to all students without discrimination with respect to race or religion, Provost Gordon N. Ray has announced.

The modified regulation also applies when ownership of presently approved housing changes, Provost Ray said, but will not apply to a house that is the private home of the owner and in which no more than three rooms are rented.

All undergraduate students at the university are required to live in housing that has been approved by the university on the basic criteria of health, safety and moral standards.

### Higher Education Rates High in Gifts, Bequests

NEW YORK. — Gifts made to a representative group of 42 private and eight public colleges and universities were higher in 1958-59 than in any year since 1920 with the single exception of 1956-57, according to a continuing study made by the John Price Jones Company, Inc., fund raising consultants and managers.

The distribution made in 1958-59 by the Ford Foundation accounts for the bulge that year, the report notes.

(Continued on Page 101)



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Excluding the Ford contributions, the 1958-59 figures were the highest reported in the 39 year history of the study.

Charles A. Anger, chairman of the Jones Company's board of directors, states that since the inception of the survey in 1920-21, the 50 institutions have received a total of \$3,208,836,000 in private support, with \$1,609,584,000, or more than half, being donated since 1950-51.

In 1958-59, the 50 colleges and universities received in gifts, bequests, foundation grants, and business gifts \$254,738,000, an increase of 2.4 per cent over last year's \$248,658,000.

Gifts from individuals accounted for 40.6 per cent of the total; bequests, 23 per cent; foundation grants, 24.8 per cent; business gifts, 11.6 per cent.

### **New Graduate School of Business Administration**

EAST LANSING, MICH. — The establishment of a graduate school of business administration at Michigan State University has been approved by the board of trustees.

Dr. Alfred L. Seelye, dean of the college of business and public service, was appointed dean of the new graduate school, which began operations on April 1.

A desire to offer the people of Michigan the finest business education available is the primary objective of the new graduate school, according to Dean Seelye. At the present time, Michigan State University has more doctoral candidates in its business school than in any other college or university in Michigan, he said. The program is one of the largest in the United States.

Citing an increased demand for highly trained business graduates by industry, Dean Seelye stated that there were many more jobs available than candidates to fill them.

Two years ago the Ford Foundation gave the college a substantial grant of money for faculty salaries, to bring to the college distinguished visiting scholars who would aid in developing the new program's subject matter.

### **Study College Freshmen for Personal Problems**

PHILADELPHIA. — Short-term counseling apparently does little good in

helping the closed-minded (highly dogmatic) college freshman solve his personal problems, a Michigan State University researcher said here last month.

Open-minded students have fewer personal problems and respond more favorably to counseling than do their closed-minded counterparts, C. Gratton Kemp told a session of the American Personnel and Guidance Association.

He said the open-minded student not only recognizes his personal problems but also does something about

solving them. On the other hand, said Mr. Kemp, the closed-minded student tends to rationalize his shortcomings and is reluctant to change his behavior to solve his difficulties.

Mr. Kemp suggests that one reason why the closed-minded student is not effective in solving his personal problems is that he feels threatened by any new experience that would necessitate his changing his ideas about himself and his world.

Involved in the research were two groups, each with 84 college fresh-

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men. All were given the Dogmatism Scale Form E and the Mooney Problem Check List. The 25 with the highest and the 25 with the lowest scores from one group of 84 were selected for counseling. The 25 highest and 25 lowest from the other group, a control unit, were given no counseling.

At the end of 10 weeks, all participants were rechecked to determine how many and which problems still concerned them.

Mr. Kemp reported that only the open-minded (low-dogmatic) students who had received counseling

had significantly reduced their personal problems. There was little or no change in the closed-minded (highly dogmatic) students who had been counseled and also no change was reported in the control group which received no counseling.

Mr. Kemp, who is in the department of communication skills at Michigan State, also found that the closed-minded students tended to picture their parents as being nearly perfect. Such students also had difficulty evaluating parental influence.

The open-minded students took a

more realistic view of their parents, Mr. Kemp observed. They indicated that while their parents had many good points, they also had some shortcomings.

## Case's Graduates Offered Higher Starting Salaries

CLEVELAND. — This year's Case Institute of Technology's graduating class has received job offers averaging \$525, Dale Barbee, director of student aid and placement, has announced. Because all offers have not yet been made, it is expected that this figure will be somewhat higher by graduation time. Average salaries for the 1959 graduating class were \$501. In 1958 they were \$484.

Graduates in electrical engineering and engineering science tied for highest average salaries, each averaging \$532 per month. The highest job offer received was by a graduate in the department of mechanical engineering who was offered a salary of \$750 a month.

Mechanical engineers were in third place, with salaries averaging \$531 a month. Physics majors were also in great demand with job offers at \$527 a month. Graduates of the department of management and civil engineering were offered the lowest salaries, although both of these were above \$500 a month.

## Carnegie's College for Women Hikes Tuition

PITTSBURGH. — A tuition increase of \$100 per academic year for Margaret Morrison Carnegie College for women will become effective September 1.

In announcing the increase, Dr. J. C. Warner, president of Carnegie Institute of Technology, pointed out that the over-all annual tuition at Margaret Morrison will be \$1000, the same as the other Carnegie divisions. No other fees are assessed.

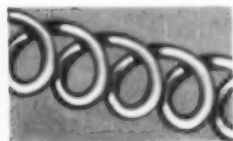
Under Dean Margaret F. LeClair, the college has an enrollment of 440 students in the following departments: biological sciences, business studies, general studies, and home economics.

Other major divisions at Carnegie Tech include the college of fine arts, the college of engineering and science, the school of printing management, and the graduate school of industrial administration.



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## NAMES IN THE NEWS

John W. Campbell, formerly director of development at Wagner College, Staten Island, N.Y., became director of development at Long Island University April 1. Mr. Campbell's main responsibility will be directing a program of fund raising in support of the new Zeckendorf campus in downtown Brooklyn.



John W. Campbell



A. Hollis Edens, president of Duke University, Durham, N.C., recently submitted his resignation to the board of trustees. There was no announcement made as to his future plans.

Dr. Franklin D. Murphy, chancellor of the University of Kansas, Lawrence, has been named as the

A. Hollis Edens, president of Duke University, Durham, N.C., recently submitted his resignation to the board of trustees. There was no announcement made as to his future plans.



Franklin D. Murphy



W. Clarke Wescoe

new chancellor of the University of California at Los Angeles, succeeding Vern O. Knudsen, who will retire on July 1. Dr. Murphy, who had served as the chancellor at Kansas for eight years, is being succeeded there by Dr. W. Clarke Wescoe. Dr. Wescoe, formerly dean of the school of medicine, will assume his new duties on July 1.

Stanley J. Wenberg, assistant to President J. L. Morrill of the University of Minnesota since 1953, has been named to the newly established post of vice president. The action was endorsed by President-Elect O. Meredith Wilson, currently president of the University of Oregon, who will assume the presidency of the University of Minnesota upon President Morrill's retirement.

Dr. Herman B. Wells has announced that he will retire as president of Indiana University, Bloomington, on July 1, 1962. He said he will

(Continued on Page 108)

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## DIRECTORY OF ASSOCIATIONS

### National Federation of College and University Business Officers Associations

President: Charles H. Wheeler III, University of Richmond; secretary: Kenneth Dick, University of Idaho.

National Federation Consulting Service, 343 S. Dearborn St., Chicago. George E. Van Dyke, executive director.

Assembly: July 6-8, French Lick, Ind.

### National Association of Educational Buyers

President: Carl A. Donaldson, University of Nebraska; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

### National Association of Physical Plant Administrators of Universities and Colleges

President: R. F. Gingrich, Kansas State University; secretary-treasurer: John H. Sweitzer, Earlham College, Richmond, Ind. Convention: May 8-11, Statler Hotel, Boston.

### American Alumni Council

President: George J. Cooke, Princeton University; executive director: Ernest T. Stewart, 1785 Massachusetts Ave., N.W., Washington 6, D.C.

Convention: July 10-14, Hotel Shoreham, Washington, D.C.

### National Association of College Stores

President: Sam Hanna, DePauw Bookstore, Greencastle, Ind.; general manager: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.

### American College Public Relations Association

President: Marvin G. Osborn Jr., Washington University, St. Louis; executive director: Frank L. Ashmore, 1785 Massachusetts Ave., Washington, D.C.

Convention: July 10-14, Sheraton-Park Hotel, Washington, D.C.

### College and University Personnel Association

President: Orie Myers, Emory University; executive secretary: Donald E. Dickason, University of Illinois. Permanent headquarters, 809 S. Wright St., Champaign, Ill.

Convention: Aug. 7-10, Carnegie Institute of Technology, Pittsburgh.

### Canadian Association of University Business Officers

President: J. A. Wheeler, bursar, Mount Allison University; secretary-treasurer: D. S. Claringbold, treasurer, Hart House, University of Toronto.

Convention: June 13-15, University of Manitoba.

### Association of College and University Housing Officers

President: Joseph P. Nye, Columbia University; secretary-treasurer: A. Thornton Edwards, Kansas State University.

Convention: July 31-Aug. 3, Indiana University, Bloomington.

### Association of College Unions

President: Chester A. Berry, Stanford University; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

### Associations of College and University Business Officers

#### American Association

President: Paul G. King, Tennessee A. & I., Nashville; secretary-treasurer: Sinclair V. Jeter, Clark College, Atlanta, Ga.

Convention: May 5-7, Southern University, Baton Rouge, La.

#### Central Association

President: Harlan Kirk, Lawrence College, Appleton, Wis.; secretary-treasurer: James J. Ritterskamp Jr., Washington University, St. Louis.

#### Eastern Association

President: Vincent Shea, University of Virginia; secretary-treasurer: Kurt M. Hertzfeld, Boston University.

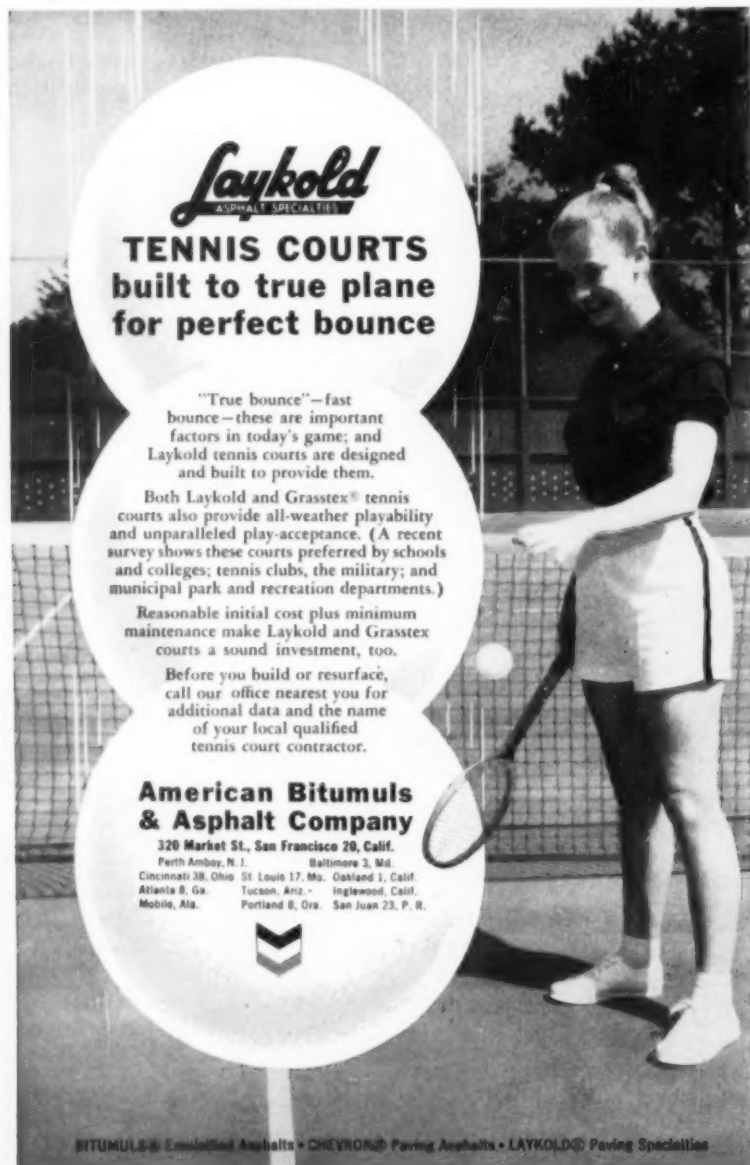
Convention: Dec. 4-6, White Sulphur Springs, Va.

#### Southern Association

President: Clarence Schepps, Tulane University; secretary: C. O. Emmerich, Emory University.

#### Western Association

President: Ernest Conrad, University of Washington; secretary: James Brainerd, Menlo College.



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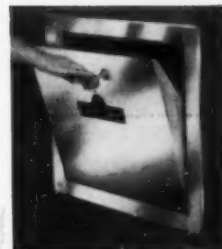
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(Continued From Page 104)  
stay on to seek foundation and industry grants to carry on research at the university.



W. S. McCready

**W. Stewart McCready**, for the last 12 years business manager at Geneva College, Beaver Falls, Pa., has been appointed business manager-controller of Washington and Jefferson College, Washington, Pa. Mr.

McCready will succeed **Harry O. Boord**, who retires as controller on June 30.



J. W. Jackson

**J. W. Jackson**, formerly assistant bursar of Middle Tennessee State College, Murfreesboro, Tenn., is now bursar of the college. **T. B. Woodmore**, for many years bursar, will continue his relationship with the institution for a few years as associate bursar.

**Carl W. Janke**, deputy controller of Harvard University since 1955, will become controller on July 1. He succeeds **L. Gard Wiggins**, who has been named administrative vice president of the university. **Edward Reynolds**, administrative vice president of Harvard since 1946, is retiring.



Carl W. Janke

**Melvin D. Sargent**, controller of Wheaton College, Norton, Mass., has been elected treasurer. Mr. Sargent, who will continue to serve as controller, succeeds **William F. Chase** as treasurer. Mr. Chase will continue to serve as a member of the board of trustees.



L. A. Kimpton

**Lawrence A. Kimpton**, chancellor of the University of Chicago, recently submitted his resignation. No date as to when the resignation will become effective has been set, but Dr. Kimpton indicated in his letter of resignation to the university trustees that he hoped that it would be possible soon to select a successor. In his message of resignation, Dr. Kimpton declared he was not interested in accepting a position with any other college or university.

**Dr. Marshall Scott Woodson**, for 10 years president of Flora MacDonald College, Red Springs, N.C., has assumed the presidency of Lees-McRae College, Banner Elk, N. C.

**Theodore P. Wright**, vice president of Cornell University, Ithaca, N.Y., will retire July 1. Mr. Wright has been in charge of the administration of sponsored research for the last 12 years. Under him the dollar volume of sponsored research at Cornell rose from \$9 million in 1949 to more than \$30 million in 1959.

**Dr. Gordon E. Michalson**, professor of historical theology at Garrett Biblical Institute, Evanston, Ill., has been named president of MacMurray College, Jacksonville, Ill. He will succeed **Dr. Louis W. Norris**, who resigned to accept the presidency of Albion College, Albion, Mich. Dr. Michalson became a member of the Garrett faculty in 1958.

(Continued on Page 110)

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Harlan Kirk

Harlan Kirk, business manager of Lawrence College, Appleton, Wis., has resigned to accept an appointment as administrative assistant to Philip

J. May, business vice president of Michigan State University.

Dr. Robert M. Strozier, 53, president of Florida State University, Tallahassee, and former dean of students at the University of Chicago, died April 20 while visiting in Chicago.

Dr. Dayton L. Ranck, vice president and treasurer emeritus of Bucknell University, Lewisburg, Pa., died March 10 following a heart attack.

The Very Rev. Mother Marie Gerard Phelan, superior-general of the Roman Catholic Institute of the Religious of the Sacred Heart of Mary, died March 22 at the age of 88. Mother Gerard came to the United States from England in 1907 to aid in founding the Marymount School, Tarrytown, N.Y. She served as dean and later as president of Marymount.

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**1937**

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**1939**

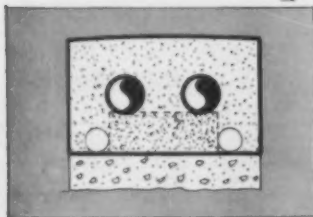
660 ft. 5" line, Mt. Olympus Dormitory  
90 ft. 2" line, Mt. Olympus Dormitory

**1940 Scheduled Installations:**  
265 ft. 10" steam line  
260 ft. 5" steam line

Comparable to the standards of performance set by its National Champions of the gridiron is the quality of performance delivered by the "Z" crete systems of insulating concrete conduit at Syracuse University. 17 separate present installations include over 6,300 feet of high pressure steam lines with temperatures ranging up to 550°. Familiar with site and job conditions, Avery M. Walsh & Sons, representing the CTC territory contractor, worked closely with King & King Architects, Consulting Engineers Robson & Woese, and Superintendent of Buildings and Grounds, Ed Gibbons, to customize each installation to the ground conditions and building layout involved. A recent check of some of the systems in service as long as 8 years revealed no signs of corrosion or deterioration. The experience at Syracuse is typical of the satisfaction of other colleges and universities with "Z" crete Brand systems installed by certified territory contractors who are specialists in underground pipe insulation problems.

**A product of the most forward-looking technical advances in underground pipe insulation, modern "Z" crete Brand systems feature:**

- Flexibility of field fabrication.
- Tough vinyl watertight membrane, stable at high temperature.
- Insulating concrete, highly resistant to water penetration.
- Emergency drains and internal vents.
- Structural concrete base pad for alignment and stability.



**"Z" crete**  
BRAND

**INSULATING  
CONCRETE CONDUIT**

Send for brochure and name of  
your nearest certified contractor



**CONCRETE THERMAL CASINGS, INC.®**

2107 NO. 34TH STREET • SEATTLE 3, WASHINGTON

3020 Grant St., Evanston, Ill.; 10 Osage Rd., Canton, Mass.; One East 42nd St., New York 17, N.Y.

## classified advertising

### POSITIONS WANTED

(Continued From Page 109)

women's college, 1,750 students; several years experience placing men and women; available July, 1960; location open. Write to Box CW 525, COLLEGE AND UNIVERSITY BUSINESS.

**Controller** — With wide, diversified experience and responsibility, now in business, wishes top administrative business position with college or university; east coast or middle west location preferred. Write to Box CW 535, COLLEGE AND UNIVERSITY BUSINESS.

**Controller-Accountant**—Presently controller of northeastern college of 2,000 enrollment; five years with present employer; age 36, married, no dependents, will relocate anywhere; B.S., Accounting major plus 24 hours towards M.B.A.; resume sent upon request. Write to Box CW 537, COLLEGE AND UNIVERSITY BUSINESS.

**Controller-Business Manager** — Experienced punched card accounting, systems, budgets, purchasing, all phases college business management; administrative responsibility; progressive institution, west or midwest; Write to Box CW 534, COLLEGE AND UNIVERSITY BUSINESS.

**Director of Housing** — Experienced educator, administrator, businessman; handle personnel, operations, maintenance for all phases of college housing; assist with plans and policies; resumé available; 49, married, Master's Degree; available July, 1960. Write to Box CW 536, COLLEGE AND UNIVERSITY BUSINESS.

**Director, University Press And/Or Auxiliary Enterprises** — Ten years experience all phases of educational management. Write to Box CW 523, COLLEGE AND UNIVERSITY BUSINESS.

**Financial Administration**—College graduate with B.S. in Accounting plus four years of experience in public and industrial accounting on administrative level desires employment in the field of college or university financial administration; military obligation satisfied. Write to Box CW 538, COLLEGE AND UNIVERSITY BUSINESS.

**Financial Administrator** — Mature college graduate with 20 years diversified experience in accounting and financial activities of large international industrial corporation desires position as business officer for small or medium size college or university; willing to relocate; available May 1st; resumé presented upon request. Write to Box CW 531, COLLEGE AND UNIVERSITY BUSINESS.

**Food Director** — Experienced all phases personnel, purchasing, production and management; southwest area. Write to Box CW 528, COLLEGE AND UNIVERSITY BUSINESS.

**Food Service Director** — Female, age 45, single, B.S., A.D.A., presently employed, desires relocation by September, 1960; 19 years successful experience in college food service both large and small institutions; prefers large institution; resumé upon request. Write to Box CW 530, COLLEGE AND UNIVERSITY BUSINESS.

**Food Service Director And/Or Assistant to Business Manager** — Food service director large multi unit university on west coast will also consider director of auxiliary enterprises or student union; many years experience in food, supervising buildings and grounds and



# classified advertising

## POSITIONS WANTED

personnel with staff of several hundred employees; excellent references, married, one daughter school age; desire relocate smaller city southern California or Arizona for milder climate; available on reasonable notice to present assignment. Write to Box CW 529, COLLEGE AND UNIVERSITY BUSINESS.

**Food Service Director** — Private boys' school interested in relocating to college in the north-eastern area. Write to Box CW 515, COLLEGE AND UNIVERSITY BUSINESS.

**Manager** — Cafeteria, student union and catering; ten years college experience; available immediately. Write to CHARLES PACK, 1898 Capri, Memphis, Tennessee.

**Physical Plant Administrator Or Staff** — Extensive experience all phases physical plant operation, maintenance and construction with proven supervisory and management ability; MS degree in Engineering, registered professional engineer, now associated physical plant work, desire west or south location. Write to Box CW 521, COLLEGE AND UNIVERSITY BUSINESS.

**Staff Engineer** — Fully qualified for director of plant position; graduate MIT, SB in Building Engineering and Construction; fourteen years experience with leading manufacturer, steam boiler power plant equipment and appurtenances; 7½ years experience with major middle east oil producer in home office and field; will consider any location; complete resume available upon request. Write to Box CW 505, COLLEGE AND UNIVERSITY BUSINESS.

**Superintendent of Buildings and Grounds** — 15 years experience supervising general maintenance work, janitorial services, groundsman, purchasing, budget preparation, auxiliary services including a training program for student and other workers; 8 years experience representing the college with engineers and architects on new building construction and remodeling; two years experience in the preparation of data for financial drives; college work in engineering and business administration; presently employed by mid-west university; excellent references from present and past employers. Write to Box CW 517, COLLEGE AND UNIVERSITY BUSINESS.

## POSITIONS OPEN

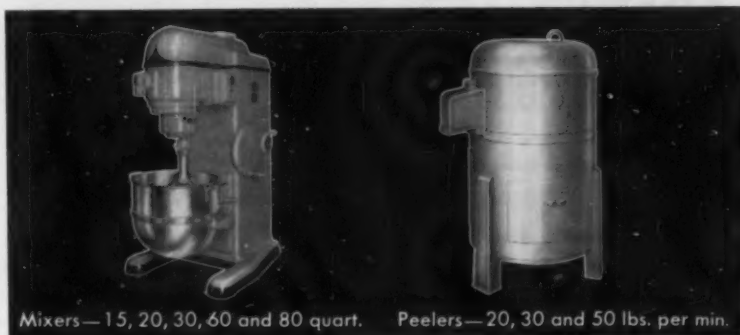
**Accountant**—Man to program and evaluate punch card systems; experience in all phases of university accounting preferred; excellent opportunity with large midwestern private university; send resume and salary requirements to Box CO 348, COLLEGE AND UNIVERSITY BUSINESS.

**Business Manager**—Midwestern liberal arts college of national stature and strong financial standing; position requires responsibility for financial management and physical plant operations, and offers an opportunity to assist in growth of expanding program; send resume of training and experience to Box CO 357, COLLEGE AND UNIVERSITY BUSINESS.

**Business Manager** — Enrollment 300; senior position; college experience required; salary open; responsibility for administration and policy recommendations in budget; accounting procedures and controls, purchasing and inventories. Write President's Office, CAZENOVIA JUNIOR COLLEGE, Cazenovia, New York.

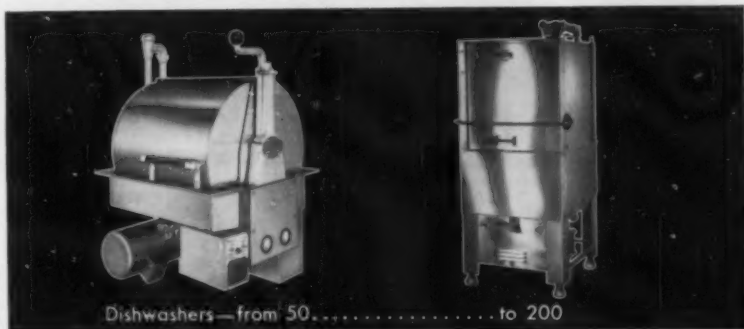
(Continued on Page 112)

# BLAKESLEE-BUILT MACHINES



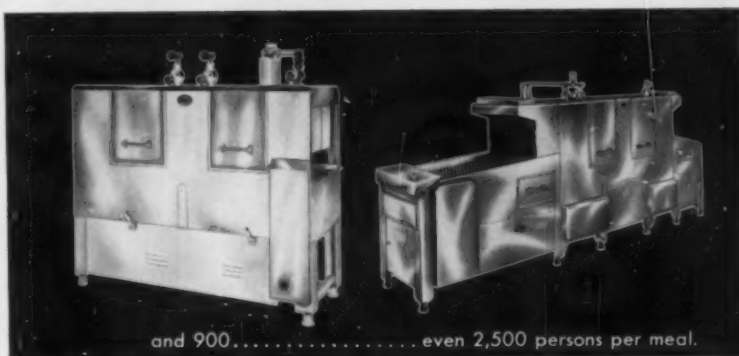
Mixers—15, 20, 30, 60 and 80 quart. Peelers—20, 30 and 50 lbs. per min.

## ...FOR PREPARING FOOD...



Dishwashers—from 50.....to 200

## ...AND WASHING THE DISHES



and 900.....even 2,500 persons per meal.



If you wish, a Blakeslee Representative will give you free assistance in sizing the best suited Blakeslee Kitchen Machines for your requirements.

**G. S. BLAKESLEE & CO. DEPT. 120-I**  
1844 South Laramie Ave., Chicago 50, Ill.

- ☐ Have a Blakeslee Representative call  
Send literature on: ☐ Mixers ☐ Peelers  
☐ Dishwashers \_\_\_\_\_ No. persons you serve per meal

Name.....

Address.....

City.....Zone....State.....

See us at the NRA Show, booths C44—C54

For additional information, use postcard facing back cover.



# classified advertising

## POSITIONS OPEN

(Continued From Page 111)

**College Budget Director** — For rapidly growing mid-western state college having an enrollment of 3100; position involves budget preparation, supervision of divisional allotments spending, cost studies and related assignments; salary open; send resumé of educational preparation, professional experience and references to Box CO 351, COLLEGE AND UNIVERSITY BUSINESS.

**Dietitians** — University in Rocky Mountain region has openings for dietitians commencing September 1, 1960; position entails managing either a men's or women's dormitory housing 400 students; fringe benefits include one month paid vacation, sick leave, good retirement and hospital plan, above average salary and offers one the opportunity to express their ability and ideas. Write to Box CO 355, COLLEGE AND UNIVERSITY BUSINESS.

**Food Controller** — New position, excellent opportunity, responsibilities to include: master menus, food testing, standardization of menus etc. for expanding food service department; college degree in Institutional Management

and two years top supervisory experience required; excellent advancement opportunities, retirement, sick leave, social security, excellent vacation, 5 day week. Apply to Gilbert P. Volmi, Manager, University Food Service, UNIVERSITY OF MARYLAND, College Park, Maryland.

**Food Service Directors** — Excellent opportunities are available for young men and women with food service experience; a leading food service caterer needs managers immediately for: colleges and schools; salary open; relocate. Send resumé to Box CO 285, COLLEGE AND UNIVERSITY BUSINESS.

**Food Service Manager** — Excellent opportunity, position available July, 1960, management of dining hall serving 9,000 meals per day, 8 cafeteria lines, catering, 120 on staff; college degree in Institutional or Restaurant Management and three years top supervisory experience required; excellent salary, retirement, sick leave, social security, excellent vacation, 5 day week. Apply to Gilbert P. Volmi, Manager, University Food Service, UNIVERSITY OF MARYLAND, College Park, Maryland.

**Food Service Manager** — Salary range \$436-530; college graduate with training in institutional management or dietetics, with at least one year experience managing food service operation; in charge dining commons and catering; retirement, vacation and sick leave benefits. Contact Mrs. Elva K. Saltzen, Employment Representative, Personnel Office, UNIVERSITY OF CALIFORNIA, Davis, California.

**Food Service Manager** — Man or woman; salary range \$436-530; college graduate with training in institutional management or dietetics; also at least one year experience managing food service operation, as will be in charge of same for 615 students; rural living,

with retirement, vacation and sick leave benefits. Contact Mrs. Elva K. Saltzen, Employment Representative, Personnel Office, UNIVERSITY OF CALIFORNIA, Davis, California.

**Superintendent of Buildings and Grounds** — Complete responsibility for buildings and grounds, operation, maintenance and repair; plant consists of fifteen major buildings and forty acres of campus; salary commensurate with background experience; house available; college is in middle west in community of 25,000; send resumé to Box CO 350, COLLEGE AND UNIVERSITY BUSINESS.

## MISCELLANEOUS

**COLLEGE FOOD SERVICE**  
Trainees Food Directors  
Chief Managers

Leading College Food Service organization has positions available for quality-minded young male graduates (22-35); excellent salary, unusual opportunities for advancement; send resumé of your experience:

**SAGA FOOD SERVICE**  
174 West College Street  
Oberlin, Ohio

## LIBRARY BUILDING PLANNERS

A collection of five hundred 2x2" colored slides, two hundred and fifty 8x10" black and white photographs, copies of floor plans and other printed matter descriptive of more than fifty college and university library buildings recently constructed in the United States. For rent. Write to Box CM-1, COLLEGE AND UNIVERSITY BUSINESS.

## COLLEGE AND UNIVERSITY BUSINESS

919 N. Michigan Avenue, Chicago 11, Ill.



### WALL-SAVING EASY CHAIR No. 680

Matching sectional and stationary davenport available.

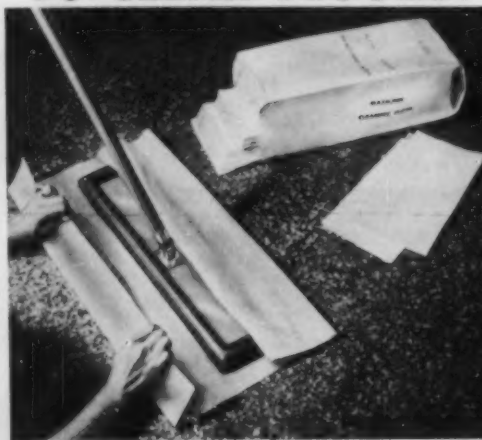
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or write us for  
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**AMERICAN**  
CHAIR COMPANY  
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## A whole new way TO CLEAN FLOORS!



with Masslinn®  
**CLEANING CLOTHS\***  
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SEND FOR SAMPLES AND DETAILED INFORMATION

CHICOPEE MILLS INC. • 47 WORTH ST., N.Y. 13, N.Y.

\* They are fire retardant and contain a germicide



## WHAT'S NEW

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card on page 129. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

### Complete Food Center in Self-Contained Cabinet

The Chef "President II" is a complete food center for faculty or other resident housing, student unions and other areas. It is self-contained in a smartly styled cabinet available in natural wood-grain finishes that blend with any decor. The unit is made up of a four-cubic-foot refrigerator with a seamless plastic inner-



liner and large horizontal freezer, and an electric cooking top equipped with 110 or 220-volt mono-tube tilt-up surface units. The work top includes a sink and is one solid piece of stainless steel. The door, storage compartment and refrigerator lock separately and independently. General Air Conditioning Corp., 4542 E. Dunham Rd., Los Angeles 23, Calif.

For more details circle #849 on mailing card.

### Round Top Waste Receptacles May Now Carry Messages

Schools and colleges may now stencil special instructions or warnings on the United Round Top Waste Receptacles. A recently developed stencil rack permits the printing of notices or other messages on the curved surfaces of the receptacles. United Metal Cabinet Corp., 8 E. 36th St., New York 16.

For more details circle #850 on mailing card.

### Emergency Exit Window for First-Floor Evacuation



Designed for emergency exit from ground-floor classrooms and other areas, the Lupton Emergency Exit Window is hung on three half-surface hinges that allow the complete window to swing outward 180 degrees from its frame. The aluminum window resembles and can be used with standard projected windows,

and offers all the advantages of regular projected ventilator windows, including air-flow directed upward, protection from rain and ease of cleaning. Constructed from heavy extruded aluminum sections, the windows are available in widths from two feet, 11 inches to three feet, four inches, and in heights from four feet, one inch to five feet, one inch. If desired for uniformity in appearance, the Lupton Emergency Exit Window is also available without projected ventilators or with horizontal muntins. Michael Flynn Mfg. Co., 700 E. Godfrey Ave., Philadelphia 24, Pa.

For more details circle #851 on mailing card.

### Electronic Learning Center Has Wide Range of Use

In addition to providing a completely functional, integrated electronic system for foreign language instruction, the Electronic Learning Center introduced by American Seating has many other uses in the classroom. It may be used in classes for speech therapy, remedial reading, pub-



lic speaking and voice training, and for individual tutoring. The top quality, integrally engineered system, with the furniture and all other vital components designed and built specifically for the purpose, includes the teacher console-desk of all-steel construction equipped with four tape decks to cover varying subjects or grades of material, each with four channels; amplifiers transistorized for small size and ease of servicing; printed electronic circuits; teacher-control through a switchboard arrangement at the console-desk; swivel chairs for improved student comfort and posture control; special acoustical material for soundproofing the student stations which are built in connected units of two and four for grouping in combinations to suit classroom requirements, and other features for fast, effective teaching techniques with almost limitless flexibility and variety. With the Center each member of a language or other class may have individual instruction ac-

cording to his need, using tape-recorded lessons transmitted through earphones and monitored by the teacher. American Seating Co., Grand Rapids 2, Mich.

For more details circle #852 on mailing card.

### Two Multi-Purpose Slicers Introduced by Hobart

Two new food slicers are now offered in the Hobart line. Model 1612 and



Model 1712 feature quick, uniform, crumb-free slicing, and adapt to multi-purpose use through interchangeable food chutes and adjustable fences which permit random slicing of fruits, vegetables and meats. Both slicers have totally enclosed motors, neon lights to indicate motor operation, and are easy to clean and maintain. Model 1712 has a new high capacity for food slicing, accommodating even a 35-pound cooked roast. The Hobart Mfg. Co., Troy, Ohio.

For more details circle #853 on mailing card.

### Domino Case Goods for Dormitories

The attractive line of Domino tables and seating pieces is now available with matching case goods for dormitories. The simple modern lines and styling conceal the heavy duty construction of the furniture which is designed to withstand institutional use. The steel frames of the Domino line are welded, one-piece units, finished in white, turquoise, black or copper mist, and sides and fronts are of wal-



nut or cherry with tops of white cork or wood grain finish. Case goods include a five drawer chest, desks with or without luggage rack, TV stand, night stand, corner step table, coffee table and headboards. The Troy Sunshade Co., Troy 1, Ohio.

For more details circle #854 on mailing card.

(Continued on page 114)



## DuPont Fabrics Make Attractive Carpets

Carpets woven of patterned nylon, a newly developed form of "Orlon" acrylic fiber, and combinations of materials are introduced by DuPont and manufactured by established carpet makers. Patterned carpet is now available in nylon in a variety of colors and at modest price. The new staple carpet fiber recently intro-



duced by DuPont as "Orlon" virgin carpet acrylic is blended with wool, or with modacrylic fiber and is woven, tufted or knitted to produce attractive, long wearing carpeting in a wide selection of patterns and colors. The highly durable new carpet materials are resistant to crushing and matting, have high cleanability and are said to provide superior clarity of color and fade resistance. E. I. du Pont de Nemours & Co., Wilmington, Del.

For more details circle #855 on mailing card.

## Wet Wiping Cloth Picks up Soil and Stain

A recently developed textile fabric known as Premium Mesh is used to form the new Miracloth for food service departments, laboratories and other areas where wet wiping is required. The material is non-souring and minimum-staining, and when wet has a water-retaining capacity that quickly loosens and picks up all soil and stains. It is lint-free and sanitary, as all dirt is released by a simple rinsing. Chicopee Mills, Inc., Miracloth Sales, Milltown, N.J.

For more details circle #856 on mailing card.

## Opaque 1000 Delineascope Offered in Two Models

Two basic models are offered in the all new AO Spencer Opaque 1000 Delin-



eascope. Adjustments and controls are on the right hand side of the instrument for easy operation. Convenience is also provided with the new optical pointer and locking platen. The superior quality coated projection objective and all-glass reflecting system combine with a 1000-watt bulb to produce maximum light on the screen for a sharp projected image.

The instrument remains cool and safe to touch through the efficient cooling system which also protects copy from the heat. The overall weight is kept to a minimum for easy portability. American Optical Co., Instrument Div., Buffalo 15, N.Y.

For more details circle #857 on mailing card.

## Wall-Hung Teaching Units Are Flexible and Interchangeable

The new Moduwall developed by Brunswick is described as a "working wall for learning." It consists of a series of flexible and interchangeable teaching aids which are easily hooked into place to meet the requirements of the particular class. Units include chalkboard, tackboard, pegboard, flannelboard, easel board, wall-hung cabinets and open shelves, and utility rails. Each is based on a four-foot wide scale for complete interchangeability, permitting functional and flexible utilization of classroom wall space. Only the wall-mounted standards into which the various units are hooked are stationary. The component parts can be hung at higher or lower intervals for comfortable and correct accommodation to dif-



fering eye levels. The Brunswick-Balke-Collender Co., 623 S. Wabash Ave., Chicago 5.

For more details circle #858 on mailing card.

## Upholstery Fabrics in Wide Choice of Colors

Two durable new materials available in a wide choice of colors dyed to resist fading have been added to the Royal line of upholstery fabrics. Gros Point is a tightly woven fabric of wool mohair and viscose yarns which is washable, dust shedding and guaranteed by the manufacturer to be mothproof for five years. Tuf-Weave, a tweed woven of cotton, has a tough acrylic backing for added wearability. Royal Metal Mfg. Co., One Park Ave., New York 16.

For more details circle #859 on mailing card.

## Compact Unit Ventilator Line Saves Floor Space

Minimum floor space is required for the all-new compact line of heating, ventilating and air conditioning unit ventilators introduced by Trane. Occupying 21 per cent less floor space than previous Trane heating unit ventilators, and 29 per cent less than air conditioning units, considerably more space is available in the classroom for aisles or seating. Designed to heat and ventilate, and to provide complete air conditioning as desired, the unit ventilators are only 11½ inches

deep. They are constructed of 14 gauge steel with matching shelving of 16 gauge. Modern in design, the units have top surfaces of patterned hard-top material.

Trane Unit Ventilators can be installed to provide complete air conditioning at the beginning, or they can be so equipped that future cooling requires only the addition of a chilled water source. Units may be used in either steam, hot water or electrical heating systems and are avail-



able in a broad range of unit capacities and a variety of controls for selection of the most economical unit for any type of school in any climate. The Trane "Kinetic Barrier" principle to combat downdraft from large window-walls is built into the new line. The Trane Company, LaCrosse, Wis.

For more details circle #860 on mailing card.

## Wide Corrective Range in Cincinnati Clock System

A 12-hour corrective range plus hourly correction are features of the new Cincinnati Time Recorder minute impulse clock system. With the system, time recorders, time stamps and program controls can be operated without an auxiliary relay device, all clocks can be set to the correct time at any period of the day from a central location, and maintenance is at a minimum due to the absence of continuous moving parts. Cincinnati Time Recorder Co., 1733 Central, Cincinnati 14, Ohio.

For more details circle #861 on mailing card.

## Mobile Double-Sided Book Cart of All Steel Construction

Eighteen feet of book storage space is provided in the mobile, double-sided book cart recently introduced by Grade-Aid. The cabinet is only three feet wide by three feet high but the two welded shelves on each side of a center separator permit



access by several students at the same time. Both sides of the cart extend above the top shelf to hold books in place and the four heavy duty casters make it easy to handle. It is available in a lifetime gray or tan enamel finish. Grade-Aid Corp., 46 Bridge St., Nashua, N.H.

For more details circle #862 on mailing card.

(Continued on page 116)



*Unlimited room  
arrangements with  
DORM LINE plans like these...*



*Planning...installation...maintenance...  
financing—all EASIER with Simmons Dorm Line*

From start to finish, your job is simplified with Dorm Line installations—simplified even in building design. Rooms may be planned in standard shapes and sizes to save time and costs. They may be arranged in a wide variety of ways without loss of spaciousness. Then as you add Dorm Line units, you achieve efficient, colorful, homelike rooms.

Installation is quick and easy—no time-consuming custom-built wardrobe or closet construction required. Easy

maintenance—certainly. Steel construction means "student-proof" abuse-resistance and durability...wardrobe frames never warp...doors won't sag or stick...steel drawers assure smooth, quiet operation.

Money problems are easily solved. Simmons Dorm Line wardrobes, chests, desks—even beds—are built-in to qualify for long-term government financing. This all adds up to furniture that long outlasts the loan!



Merchandise Mart  
Chicago 54, Illinois

DISPLAY ROOMS: Chicago • New York • Atlanta • Dallas • Columbus • San Francisco • Los Angeles



### Integral Back Panel on Duo-Washfountain



The foot-controlled stainless steel Duo-Washfountain is now available with a back panel. An integral part of the unit, it extends the width of the bowl interior

and the height of the sprayhead for attractive appearance with efficiency. **Bradley Washfountain Co., 2203 W. Michigan St., Milwaukee 1, Wis.**

For more details circle #863 on mailing card.

### Garland Cooking Equipment Now Offered in Colors

Garland gas and electric cooking equipment for institutional installations is now available with colored finishes on oven and compartment doors. A choice of bright yellow or coppertone porcelain enamel is offered, contrasted with Garland's black baked enamel, blue-black porcelain enamel and stainless steel finishes. **Garland Div., Welbilt Corp., 57-18 Flushing Ave., Maspeth 78, N.Y.**

For more details circle #864 on mailing card.



## new 50-station collator

Fully automatic . . . unprecedented performance  
without the penalty of high price or space waste!

Announcing a new dimension in collating versatility, accuracy, speed and compactness — the all-new, completely automatic Rotomatic by Thomas Collator Industries, Inc. If you collate in volume, you'll want all the details on the Rotomatic's ease of total operation and multiple savings. For complete information and prices, without obligation, write today.

- Accurately collates, counts, staggers or stitches 25,000 sheets per hour
- Exclusive push button programmer permits different jobs to be run at same time
- Occupies only 17½ sq. ft. of floor space
- Loads in less than 7 minutes . . . no adjustments for vacuum systems, fans, weights, finishes
- Handles sheet sizes from 7" x 8" to 11" x 14" in most every weight and finish
- Offers more features at a lower price than any other collator on the market



## Thomas Collator Industries, Inc.

Dept. Q4, 100 Church Street, New York, New York

### Trimline 1500 Door Closers For Narrow Stile Doors

The slim silhouette and unobtrusive appearance of the new series of Trimline 1500 door closers adapts them to narrow stile glass and metal doors for institutional use. The true liquid-type closers have the Norton-originated rack and pinion mechanism and are equipped with a newly designed spring of high-grade steel. They can be used on doors opening either left or right, swinging either in or out. Closing speed can be precisely regulated for



smooth closing throughout the entire swing of the door, and for quiet latching action. **Norton Door Closer Co. Div., Berrien Springs, Mich.**

For more details circle #865 on mailing card.

### Kimax Glass Pipe for Laboratory Waste Lines

Glass pipe and fittings for laboratory waste lines are now available in Kimax tempered, non-scaling glass. Developed by Kimble Glass Company, subsidiary of Owens-Illinois Glass Company, the new pipe is made from KG-33 borosilicate glass. It possesses excellent corrosion, chemical and heat resistance with clear-view transparency. It is highly resistant to all but a few types of solutions. Pipe and fittings are tempered for added strength and durability. The line is distributed nationally by the Glass Products Div., **Fischer & Porter Co., Hatboro, Pa.**

For more details circle #866 on mailing card.

### Kemi-Kleen Sweeper Has Disposable Cleaning Cloth

A chemically-treated cleaning cloth that picks up dust, dirt and grit as it sweeps refuse is attached to the new Corridor Size Kemi-Kleen No. 40 Sweeper for efficient cleaning of corridors, gymnasiums, as-



sembly rooms and other open areas. The disposable cleaning fabric is quickly and easily attached to the sweeper with the new fast-gripping Hinge-Lock device and presents six clean areas per cloth for thorough utility before discarding. The No. 40 Sweeper has a lightweight aluminum base effecting maximum pick-up of dust without leaning on the "Any-Angle" swivel handle which permits cleaning from any position. **Lowndes Products, Inc., 4946 Parkside Ave., Philadelphia 31, Pa.**

For more details circle #867 on mailing card.



### SpeedClean Dry Vacuum for Complete Dry Clean-Up

Designed to perform complete dry maintenance clean-up in one trip, the new dry vacuum SpeedClean has all equipment for cleaning rugs, hard floors, walls and overhead trim with hose, wand and other accessories. The disposable filter dust bag at the rear of the machine is easily removed and the large reusable refuse collection bags have draw strings at the top. A "Dust Mop Well" permits cleaning dust



mops, dust cloths, erasers and the like without stirring or spreading dust. When used in washroom maintenance, the utility basket carries supplies of towels, soap, waxes and cleaning compounds. SpeedClean is available in four models. Nobles Engineering & Mfg. Co., 645 E. Seventh St., St. Paul 6, Minn.

For more details circle #868 on mailing card.

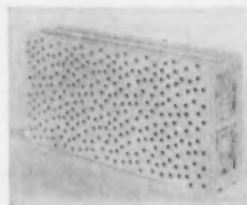
### Floor Safety and Protection In Slip-Resistant Wax

Retention of slip resistance without any noticeable loss of gloss is an outstanding feature of Fullstop, a light-colored floor polish containing synthetic resins and plasticizers dispersed in water. Fullstop has good leveling properties, is resistant to scuffing, makes no appreciable color change and strips as easily as other floor wax. It is recommended for use on asphalt, vinyl, linoleum, rubber and properly sealed wood floors. Fuller Brush Co., Industrial Products Div., Hartford 15, Conn.

For more details circle #369 on mailing card.

### Ceramic Glazed Structural Tile Incorporates Acoustical Control

Combining the principle of a Helmholtz Resonator and cells filled with fiber-



glass, the new SoundBar Ceramic Glazed Structural Acoustical Tiles offer high sound absorption and efficient sound insulation. They permit the economical construction of all-acoustical load bearing walls. Acoustical panels or random-acoustical applications may be achieved by using SoundBar acoustical tile in combination with Arketex Straight-Line Ceramic Glazed Structural Tile. SoundBar tile has a distinctive texture and is available in a

wide range of New Direction Colors. It has high resistance to moisture and fire, ability to withstand abrasion, affords thermal insulation and is easily cleaned and maintained. Arketex Ceramic Corp., Brazil, Ind.

For more details circle #870 on mailing card.

### Toilet Tissue Dispenser Holds Big Supply

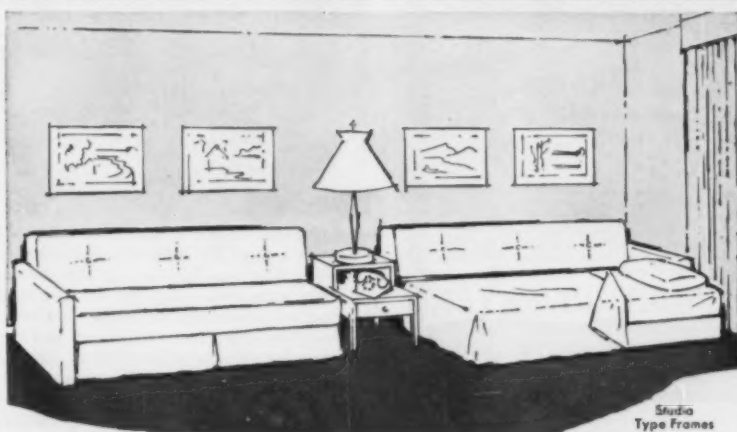
Three to seven days supply of tissue can be held in the new "Tissue-Master" dispenser. It is made of durable white plastic with a burnproof chrome top, is quiet in operation and refills easily. When the first roll is finished, the empty core is removed and the second roll automatically drops into place. The plastic and



painting. Steiner Co., 740 Rush St., Chicago 11.

For more details circle #871 on mailing card.

(Continued on page 118)



For eye-appeal, for long-term economy...

## Bed Frames by SENG

You can give high style to student and faculty quarters, yet retain low maintenance and long life by using Seng Bed Frames.

They're perfectly adapted to a wide range of applications... take extra length bedding... move easily on

large casters or non-marking Nylon glides... are ruggedly built for hardest service. Standard single and twin beds in addition to styles shown.

Your contract supplier has Seng Bed Frames, or write us for institutional literature.



Corner Cabinet Style

Schools now using Bed Frames by Seng include:

University of Pennsylvania  
Northwestern University  
Georgetown University  
Illinois State Normal College  
Lorette Heights College  
University of Chicago  
Clarke College  
St. Norbert's College  
Lake Forest Academy

**THE SENG COMPANY**  
CHICAGO AND LOS ANGELES

GENERAL OFFICE: 1450 NORTH DAYTON STREET, CHICAGO 22, ILLINOIS



# Mr. Du

**SAYS:**

In hospitals, I  
do my chores  
Nurses like  
me, too,  
I tackle problems  
by the score  
I'd love to clean  
for you!



**DuBois  
Chemicals**

**GSC**

Liquid germicidal synthetic cleaner for combating and controlling staph gram-positive and gram-negative bacteria on floors, walls, equipment. Sanitizes everything. Use in shower, lockers, etc. Obtainable only from DuBois. Ask about DuBois' many other compounds.

40 years of cleaning experience at your service.

**DuBOIS CHEMICALS, INC.**

Broadway at 7th • Cincinnati 2, O.

## Planning a Major RESIDENCE HALL

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Begin by consulting  
America's  
most experienced  
planning and design  
firm

Color studies  
prototype rooms  
and public space planning  
a specialty

HIGHEST REFERENCES

Address inquiries to:



**KEN WHITE  
ASSOCIATES**  
INCORPORATED

11 Madison Avenue  
Westwood, New Jersey

## Cork-Tex Wall Covering Has "Damage-Proof" Finish

The practically damage-proof finish on the new Cork-Tex wall covering material makes it especially effective in classroom use. Eighteen-gauge vinyl is permanently bonded to a quarter-inch thick cork sheet and is supplied in standard rolls of four by 72 feet, or in pre-framed boards ranging up to 12 feet in length for tackboard installations. The vinyl covering "heals" itself after puncture by thumbtacks, nails, picture hooks or even a knife stab. It is therefore particularly effective for tackboard or bulletin board use in classrooms



or corridors. Available in eight different colors in a linen finish, the washable vinyl covering may be had on special order in more than 100 varied shades and textures. Easily installed and highly durable, Cork-Tex is low in cost and has proved effective for classroom use through actual school installations on a long-range test basis. Bond Crown & Cork Div., Continental Can Co., Inc., 1819 N. Major Ave., Chicago 39.

For more details circle #872 on mailing card.

## Diagnostic Audio-Analyzer Facilitates Hearing Tests

Thirteen major pure tone and speech tests can be made with the new Zenith diagnostic Audio-Analyzer. More than five years of engineering research preceded introduction of the new instrument. It consists of a basic audiometer known as the ZA-200 which can be expanded by adding the ZA-400, a Diagnostic Desk Speaker which permits speech testing by either recorded or monitored live voice, or the ZA-402 Diagnostic Desk Speaker which permits the student to be tested without headphones in a sound field while wear-



ing a hearing aid. New developments make the instruments practical for all types of tests, and they are supplied in matching cabinets with burnproof, chemical proof and abrasion resistant surfaces. Zenith Radio Corp., 6001 W. Dickens Ave., Chicago 39.

For more details circle #873 on mailing card.

## Lamps\*

**CUSTOM DESIGNED AND  
BUILT SPECIFICALLY FOR  
COLLEGE RESIDENCE HALLS**



All Completely  
U. L. Approved

\*Both Portable and as Fixtures

WRITE FOR  
COMPLETE INFORMATION  
AND PRICES

**Excel**

MFG. CORP., Muncie, Indiana

## Hot and Cold Food Units in Two or Three Sections



Available in two or three-sections, the Model APT-3-3 Add-A-Teria is a combination hot and cold food transportation and serving unit. Six-inch neoprene-tired wheels make the unit readily mobile so that food can be served at any location directly from the Add-A-Teria. The Lincoln APT will hold up to 24 pans and lids 12 by 20 by 2 1/2 inches in size, up to 21 trays 14 by 18 inches, up to 21 refrigerator-type wire shelves, and has a 216-quart capacity. It can serve as many as 350 students, depending on the combinations of cold and/or hot foods, and it can be joined with other Lincoln models to handle larger numbers. Lincoln Mfg. Co., Inc., Fort Wayne, Ind.

For more details circle #874 on mailing card.

## CT Waste Destructor Is Low-Cost Incinerator

Providing incineration at a low price, the new CT Destructor is built with a heavy gauge outer shell, high heat duty firebrick back and overall insulation. A Dump-and-Shaker Lever provides for easy





## The Insured TUITION PAYMENT PLAN

This is the prepayment plan that brings the parent low-cost life and disability insurance protection, plus a monthly budget provision that extends to the final month of his educational expenses four or more years hence. Used today in many of the best-known colleges and preparatory schools, it has proven most valuable to administrative officers by providing them with a dignified, parent-approved method which:

- 1 alerts parents to their financial obligation when the student is accepted for admission;
- 2 offers parents a convenient and logical plan for meeting that obligation;
- 3 assures the parent (and thus the college) that he will have adequate funds with which to meet his college obligations in full and on time;
- 4 preserves the traditional relationship between the college and the parent—debt-free and direct.

*Individualized descriptive literature for mailing to the parents of incoming students is furnished for each preparatory school, college or university.*

WRITE TODAY FOR DETAILS

We should like to know more about the Insured Tuition Payment Plan as it would apply to the students at:

Name of School or College \_\_\_\_\_

Address \_\_\_\_\_  
Please contact: \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

**RICHARD C. KNIGHT**

INSURANCE AGENCY, INC.

*Insured Tuition Payment Plan*

38 Newbury Street  
Boston 16, Mass.

removal of ash without bending and shoveling and the swing-away charging door facilitates operation with safety. The incinerator is designed primarily for use in hospitals, schools, universities and other institutions, and can be placed in almost any location. Morse Boulger, Inc., 80 Fifth Ave., New York 11.

For more details circle #875 on mailing card.

### Kodak Ektalith Method Makes Inexpensive Paper Masters

Production of enlarged, reduced or same-size copies of different types of documents, such as microfilm records, file cards, charts, correspondence and the like,

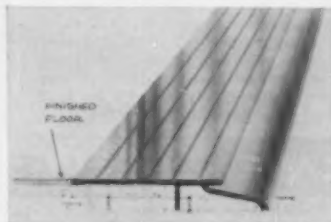


is possible with the new Kodak Ektalith Method. Inexpensive paper masters are produced photographically in two minutes, from either opaque or translucent paper. Standard duplicating equipment then makes as many copies as desired, up to 2000. An accessory copying unit is available for making high quality direct copies when no more than ten are required. With a conventional microfilm enlarger, the Ektalith also produces masters from positive microfilm records. Many halftones can be reproduced as well as copy with both fineline detail and large solid areas. The Ektalith equipment line includes a loader-processor (illustrated), two processors for use with darkroom cameras, and a copy unit which can be used with any of the three, all designed for table top use. Eastman Kodak Co., Rochester 4, N.Y.

For more details circle #876 on mailing card.

### Zero Door Saddle Eliminates Tripping

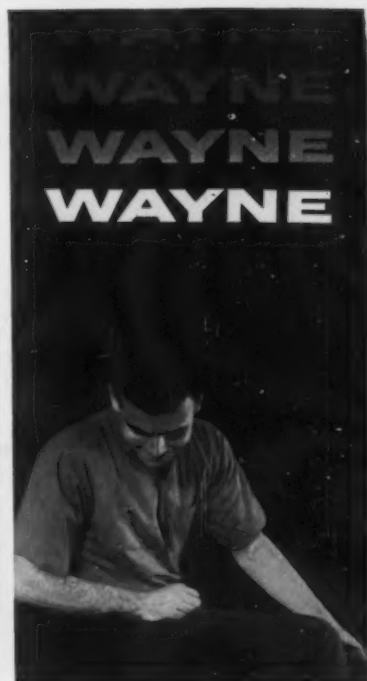
Specially designed for out-opening doors in schools, hospitals and other institutions where extra safety is important, the Zero non-trip saddle can be fitted with either a flexible hook or an extruded rigid



interlock. It is available in extruded bronze and aluminum and is an addition to the complete line of weatherstripping for regular and sliding doors and windows, lightproofing and soundproofing manufactured by Zero Weather Stripping Co., Inc., 451 E. 136th St., New York 54.

For more details circle #877 on mailing card.

(Continued on page 120)



## WAYNE OUTDOOR SEATING SYSTEMS

work wonders with  
any seating budget



Wayne Type "L" Portable Steel Bleachers. More safety, seating, savings on cramped budgets.



Sturdy Wayne Type "M" Portable Steel Grandstands grow as your program expands.



Wayne Permanent type grandstand seating systems save dollars in the largest stadium.

NEW  
1960  
CATALOG

Whatever the scope of your seating needs, whatever the size of your budget, Wayne can provide a system that gives more efficient seating . . . at greater savings. For when you call Wayne you draw on the experience of the world's largest manufacturer of spectator seating.

Write for all-new 1960 outdoor seating catalog today.

WAYNE IRON WORKS • WAYNE, PA.



## Floor Washing Buckets Now Graduated in Gallons



The Green Label Line of floor washing equipment now has graduated gallon markings permanently embossed inside and out. The new graduated buckets save time in filling and measuring floor clean-

ing solutions and are available in galvanized or stainless steel with Rol-Easy Ball-Bearing Casters. Market Forge Co., Janitorial Equipment Div., Everett 49, Mass.  
For more details circle #878 on mailing card.

## General Purpose Rectifiers for Power Supply

Designed for institutional power supplies, a new line of general purpose rectifiers is introduced by Allis-Chalmers. They are available in the 150 to 300-KW range, 350 volts DC. Requiring little maintenance, the silicon rectifiers have 95 to 96 per cent efficiency between 25 per cent and 100 per cent load, and the compact design results in a single package unit which simplifies handling and

installation. Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.

For more details circle #879 on mailing card.

## "Victorscope" Attachment for Wide Screen Films

A new anamorphic lens which will convert any 16mm projector for showing CinemaScope wide screen motion pictures is available in the "Victorscope." The lens attachment may also be used as a supplementary camera lens for photograph-



ing movies in CinemaScope. Brackets for mounting the lens to all Victor projectors are available, as are special adapters to fit most cameras. Victor Animatograph Corp., Div. of Kalart, Plainville, Conn.

For more details circle #880 on mailing card.

## R-15 Nor-Lake Refrigerator Has Two Locking Doors

Eight adjustable plated wire shelves for efficient food storage behind two locking doors are provided in the new R-15 15-cubic foot refrigerator introduced by Nor-Lake. Features of the new unit include automatic condensate removal, heater strips around both door openings to seal in the cold, and interior of embossed aluminum. Nor-Lake, Inc., Second & Elm, Hudson, Wis.

For more details circle #881 on mailing card.

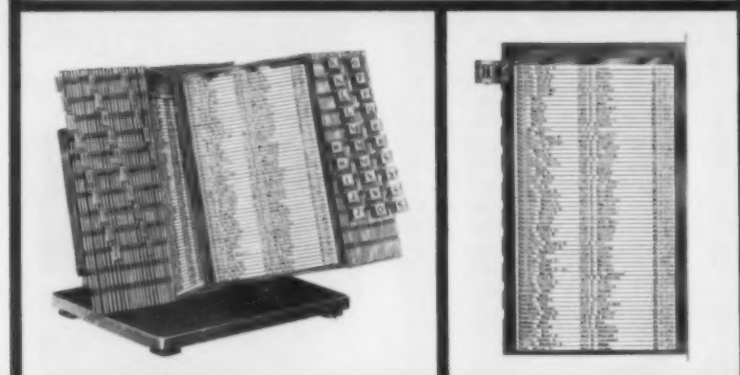
## "Swivel-Action" Sign Frames Resist Damage

Wall-mounted signs that can take bumps without damage are available in the new Milligan "Swivel-Action" Sign Frames. Attractive in appearance and easy to install, the frame is fastened to the swivel mounting bracket in such a way that if it is struck it merely folds back toward the wall. It is then easily returned to its original position undamaged. Transparent vinyl is used for the signs, thus eliminating breakage. Frames are made of heavy, non-rusting, polished extruded



aluminum with stainless steel fasteners. The signs are available in six models in sizes to meet all requirements. Milligan Corp., P.O. Box 10615, Pittsburgh 35, Pa.

For more details circle #882 on mailing card.



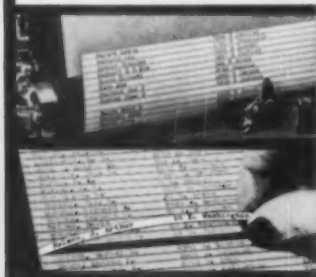
## Acme Visible Flexoline Indexes Make Student Facts Easy To Find

School's packed—classes humming—but who's who and where? There's an inexpensive way to find out as quick as a glance. Acme Visible Flexoline indexes give you fingertip control of the complete student enrollment—serve as a cross index to home room or class.

There are no cards to re-shuffle—no lists to re-type to keep reference day-to-day

perfect. Minimum school office personnel easily handles these portable units with capacities of 350 to 25,000 names.

Write Acme Visible for more facts about the world's fastest reference equipment for educational administration. FREE detailed booklets illustrate various school record systems—one tailored to your needs. MAIL THIS COUPON NOW!



## ACME VISIBLE

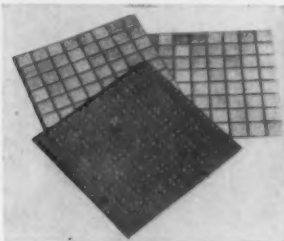
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6505 West Allview Drive, Crozet, Va.  
Please send me FREE detailed booklets on school record systems.

NAME \_\_\_\_\_ TITLE \_\_\_\_\_  
SCHOOL \_\_\_\_\_  
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_



### Rubber-Mounted Ceramic Tile for Flexible, Resilient Floors

Developed by Romany-Spartan Research, Ceramaflex is a flexible, rubber-mounted ceramic flooring providing the beauty and permanence of ceramic mosaics with rubber cushioning. The one by one-inch ceramic units are fused into a nine-inch square rubber grid 7/32 of an inch thick. Both the ceramic surface and the rubber grout joints are highly resistant to alkalis, greases and oils, and the flooring



is immune to indentation, difficult to scratch or mar, and highly slip and fire resistant. It is easy and economical to install and to maintain and is available in twelve attractive patterns, each with a medley of harmonizing colors. United States Ceramic Tile Co., 217 Fourth St. N. E., Canton 2, Ohio.

For more details circle #883 on mailing card.

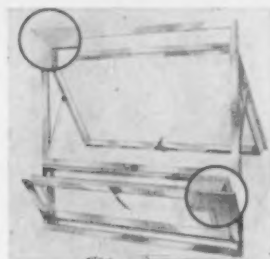
### Lighting Fixture Assembly for Long-Span Roof-Ceiling Deck

A greatly simplified lighting fixture for flush installation in standard long-span combination steel roof-ceiling deck in auditoriums, gymnasiums and similar construction is introduced by R. C. Mahon. Developed in collaboration with manufacturers of lighting fixtures, it is designed for installation in spans up to 30 feet or more, without intermediate supports. It requires no special adapting devices or modification of the deck and is of 20-gauge steel, finished in white enamel, in 47, 72 and 96-inch lengths, in Slimline and 40-watt rapid start. The unit is made to accommodate glass or plastic louvers, or a combination of both. The R. C. Mahon Co., 6565 E. Eight Mile Road, Detroit 34, Mich.

For more details circle #884 on mailing card.

### Heliarc Welding for Smooth Corners on Peterson Aluminum Windows

Heliarc welding is used to form Peterson Paragon Projected Aluminum Win-



dows, giving smooth flush exterior surface lines with rigid, rugged sections for heavy duty use. One-quarter inch thick solid metal forms the head of the hopper vents and the sill of the projected vents for

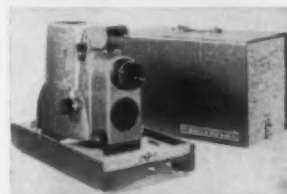
operating rigidity. The heliarc process is said to make welds stronger, more ductile and corrosion resistant. Paragon projected windows are available in a full range of sizes and may also be had in single or multi-story curtain wall systems. Peterson Window Corp., 734 Livernois Ave., Ferndale 20, Mich.

For more details circle #885 on mailing card.

### Model 724 Specialist Projector for Filmstrips and Slides

Adjustable for manual and semi-automatic slide operation, the new Model 724 Specialist projector will accommodate filmstrips or two by two slides. It is available with both 750 and 500-watt illumination. The new Airflow case elevates the

projector base for increased cooling capacity and is styled in metallic fawn and brown color combination. A permanently



attached instruction guide on the die-cast aluminum housing of the projector facilitates its use. Bell & Howell, 7100 McCormick Rd., Chicago 45.

For more details circle #886 on mailing card.

(Continued on page 122)

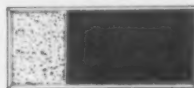
## BECKLEY · CARDY SIMPLEX units



with  
HANGING  
STRIPS  
for raising and lower-  
ing for different age  
groups



**CUSTOM-BUILT**  
to your instructional needs  
with chalkboard, corkboard or pegboard



— one material or any combination

A practical solution to diversified chalkboard and mounting problems. You plan each unit according to your requirements. A simple sketch with dimensions and materials indicated is all we need.

Your units are built in our factory and delivered to you ready to hang and use. All materials of proven, durable quality. Aluminum trims and chalk troughs are expertly fitted.

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**Dorsette Institutional Tissue  
Is Two-Ply Facial Quality**



A new two-ply facial quality institutional tissue is available in Marathon Dorsette. It has a smooth, soft, white surface with a fast rate of absorbency. Rolls

of 500 two-ply or 1000 single-ply four and one-half-inch square sheets are supplied in shipping cases especially designed to be used as waste receptacles when empty. **Marathon, Div. of American Can Co., Menasha, Wis.**

For more details circle #887 on mailing card.

**Dish and Tray Lifters  
for Food Service Lines**

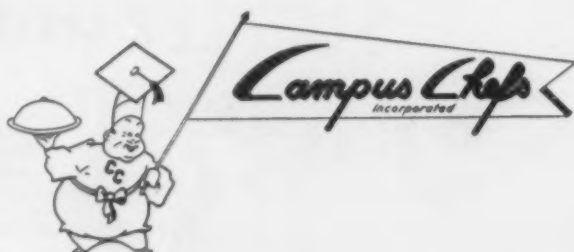
Shelleymatic elevators raise the stacks of dishes and trays to convenient serving level in the Ideal Dish and Tray Lifters recently introduced. Designed for speedy service and convenient storage, the all stainless steel dispensers are easy to keep clean and sanitary. Precision springs automatically bring dishes or trays to con-

venient serving position. A top adjustment ring is simply rotated to attain the desired level within coated posts which keep dishes and trays in neat stacks. To refill, dishes and trays are merely placed in position and the elevators and precision spring mechanism expand or compress in direct ratio to the load. Four swivel casters on each unit permit easy movement to place of need where they serve as stationary dispensers. Ideal Lifters are available in single, double or four-stack



Dish Lifters, heated or non-heated, and in standard sized Tray Lifters. **Swartzbaugh Mfg. Co., Murfreesboro, Tenn.**

For more details circle #888 on mailing card.



*An Invitation  
To School Administrators*

If your student food service is less than 100% satisfactory, let us, without obligation on your part, make a

*Free Survey*

of your Food Operation - - then show you how **CAMPUS CHEFS** can fully satisfy the individual requirements of your student food service.

**CAMPUS CHEFS** offers complete professional management of your food service - - relieves you and your personnel of all responsibility for the operation, yet is guided by your policies at all times in all respects.

Your inquiry will be welcomed. Write or phone today for immediate consultation.

**CAMPUS CHEFS**  
INCORPORATED

125 BROAD STREET, ELIZABETH, NEW JERSEY

ELizabeth 4-5500

**Dust Absorber Liquid**

**Leaves Germicidal Residue**

An odorless damp-dusting solution, Dust Absorber destroys germs while removing dust. It deposits an invisible residue that attacks bacteria up to 24 hours after drying but is non-toxic to humans and non-sensitive to the skin. Particularly potent against molds and fungi, the liquid destroys "athlete's foot" and other organisms in locker rooms, showers and swimming pool areas that are damp dusted daily. **Parlee Co., Inc., 302 E. St. Clair St., Indianapolis 2, Ind.**

For more details circle #889 on mailing card.

**Air\*San Waste Receptacle  
Has Built-in Spray Sanitizer**

Odor and bacteria are eliminated in the Air\*San Waste Receptacle which has an individual Ozium sanitizing spray dispenser built into its cover. A pushbutton on the top permits a spray of Ozium to be sent into the receptacle to sanitize the interior and its contents. The patented Magi-Close



features smooth, foot-operated opening and completely noiseless closing. The rustproof, Epon-coated liner, stainproof and impervious to most chemicals and alkalis, is easily removed for emptying. The streamlined receptacle is finished in white or Silvertone with chrome top. **Woodlets, Inc., 2048 Niagara St., Buffalo 7, N.Y.**

For more details circle #890 on mailing card.



### Sanacoustic HCS System Heats, Cools and Sound-Conditions

All areas of a room, even those adjacent to window walls, can be used in comfort in the coldest or the hottest weather with operation of the Sanacoustic HCS System for radiant heating, cooling and sound-conditioning. The radiant ceiling not only provides draft-free heating and cooling, but maximum acoustical effi-



ciency, absorbing up to 90 per cent of the sound that strikes it. Made entirely of standard components which are easy to install and economical to maintain, the HCS also leaves the total floor area free and unencumbered for flexibility in handling interior requirements.

Basic components of the HCS system include water-carrying coils for heating or cooling, a sound-absorbing insulating blanket, and perforated metal panels which form the finished ceiling and can be washed when necessary. To heat, circulating warm water inside the HCS tubing radiates to the steel panels, then downward to warm surfaces and occupants in draft-free comfort. In cooling, excess heat is radiated to the ceiling surface and carried away by cool water circulating in the same coils, with water temperature controlled to prevent condensation. The system is economical to install and effects fuel savings while providing comfort in any weather. **Johns-Manville Corp., 22 E. 40th St., New York 16.**

For more details circle #891 on mailing card.

### Junior Food Storage Units Adapt to Many Needs

The building block principle is utilized in the new TherMcCold Junior Food Bank



Units. The three compact units include hot, cold and freezer cabinets for storing food ready for serving in lunchrooms, dining rooms and similar areas served by central kitchens. The self-contained Junior Units can be combined in any desired variations, utilizing any combination of

tray slide units and flush-front drawers. They are available in wall-mounted, under-counter and upright models for storing any assortment of hot cooked foods or cold foods without loss of original flavor. **TherMcCold Corp., Div. of McCall Refrigerator Corp., Hudson, N.Y.**

For more details circle #892 on mailing card.

### Steel Magazine Rack Has Movable Partitions

Magazines, reference material and other literature can be stored or displayed in the three-shelf rack introduced by Smith Systems. Designed to hang on the wall or stand on table or desk, the all-steel rack has movable partitions for orderly separation of material of any width up to

nine inches. The rack and the loose dividers of formed steel are finished in tan



baked enamel. **Smith Systems Mfg. Co., 212 Ontario St. S.E., Minneapolis 14, Minn.**

For more details circle #893 on mailing card.  
(Continued on page 124)

## COMFORT AND DURABILITY

**THIS IS IT!** Here is an average man, an ordinary human being, enjoying comfort. If he were larger, or smaller, he would still be comfortable in a Durham folding chair. These well-built chairs are designed for the comfort of people! We would not presume to read this man's thoughts, but chances are ten to one were we to ask him what make of folding chairs he'd buy, he'd say: "This make!" It's a sure thing he'd be 100% sold when given the complete story of Durham construction and materials. They insure full value for every seating dollar.



No. 868



No. 875



No. 885R

Tubular or channel steel frames in many styles: All steel; padded, upholstered seats and backs; wood seats. Tablet armchair with wrap rack. Chair sizes for children under 10. Chair accessories include bookracks and kneelers.

Write for catalog. See why your best buy is Durham.



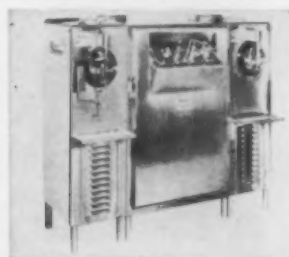
**Durham**  
THE FINEST METAL FURNITURE

DURHAM MANUFACTURING CORPORATION • MUNCIE, INDIANA





## Syrup and Flavor Tanks Mounted on Sweden MixSupplier



Ice cream dishes or drinks can be produced in a matter of seconds with the new model Sweden MixSupplier which has refrigerated syrup and flavor tanks mounted in the front of the door. In addition to fast service with minimum effort, there is no handling of heavy mix cans as they are placed in the MixSupplier by the deliveryman. The illustration shows the MixSupplier with tanks, the Shake-Maker and the SoftServer installed on the modular system for efficient layout in minimum space. Sweden Freezer Mfg. Co., 3401 17th, Seattle 99, Wash.

For more details circle #894 on mailing card.

## Desktop Previewer for 35mm Filmstrips

Speed and convenience in previewing audio-visual materials is provided in the Viewlex Instant 35mm Filmstrip Previewer for desktop use. The only working parts on the new previewer are the film-

strip advance knob, the focusing knob and the on-off switch. Threading requires only the start of the leading edge of a filmstrip in the transport slot. The oversized seven by nine-inch ground glass viewing screen gives sharp contrast for color or black



and white films. Carried in a luggage-type case, the Previewer is set up for use in a matter of seconds. Viewlex Co., Inc., 35-01 Queens Blvd., Long Island City 1. For more details circle #895 on mailing card.

## Pre-Cut Foil Sheets in Dispensing Package

Handy pre-cut sheets of aluminum foil for use in the kitchen, home economics department and other departments where small amounts of material are wrapped for storage, are now available in an inter-fold pop-up box. In addition, self-dispensing rolls and rectangular cut sheets of foil are available for institutional use. Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland, Calif.

For more details circle #896 on mailing card.

## Lightness and Beauty in Molded Dormitory Furniture

Molded of fiber reinforced polyester resin for a tough and rugged structure made to last a lifetime, Thaden dormitory and lounge furniture is easily handled due to its light weight and is attractive and modern in appearance. The careful organic design, with contours and dimensions engineered to the human form, assures maximum comfort. All interior surfaces are foam padded, with supplemental foam padding under the foam seat cushions. The upholstery covers are easily removed for cleaning, change of decor or in case of accident. Pieces in the line



include dormitory and lounge furniture of varying design as well as attractive lightweight stacking chairs which are easily stored when not in use. Thaden Molding Corp., High Point, No. Car.

For more details circle #897 on mailing card.

## Repair Parts Kit for American-Standard Faucets

The Sexauer Handy Andy No. 28 Assortment is a kit of assorted repair parts specifically designed for servicing American Radiator-Standard Sanitary Corporation's series "R" and "B" faucets. The compact kit includes the right quantity and variety of essential small repair parts and contains 421 items in all, packaged in a sturdy metal carrying case with divided tills. J. A. Sexauer Mfg. Co., 2503 Third Ave., New York 51.

For more details circle #898 on mailing card.

## Portable Paging Unit Transistorized For Indoor and Outdoor Use

The "Transi-Page," a new transistorized portable paging unit for both indoor and outdoor use, is equipped with a combination adjustable power output and volume control which restricts distortion. The circuit design permits extremely minute drain on batteries and provides greater compactness with service-free operation. Included with the unit are a heavy-duty plug-in microphone, six-foot cord, eight-inch



speaker, carrying handle and shoulder strap, as well as a 25-foot extension cord and connector for outdoor use. Raven Electronics Mfg. Co., 2130 W. Carroll Ave., Chicago 12.

For more details circle #399 on mailing card.



SEE a demonstration by a specialist

FASTER  
"DRYER"  
INSECTICIDE  
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for FREE demonstration or literature address:  
**WEST CHEMICAL PRODUCTS INC.**, 42-36 West St., Long Island City 1, N. Y.  
Branches in principal cities • IN CANADA: 5621-23 Casgrain Ave., Montreal





### Table With Chairs in Portable, Folding Unit

Pupils can walk without obstruction to the comfortable chair seats on the unique Model TC-65 Sico unit. Combining comfortable attached chairs with a folding, portable table unit, the new TC-65 provides comfort and convenience while retaining the advantages of fixed dimension seating. The chairs swivel 180 degrees to permit pupils to face away from the table when desired, yet return automatically to position when vacated. The contoured plywood or molded plastic chairs



are anchored to the table by structural steel pedestals which are set to one side for full leg freedom, yet fold out of the way with the table. Produced in ten-foot lengths, the unit will accommodate 12 persons, and aisle space is maintained since the chairs (or stools if preferred) cannot be pushed out of line. Four-inch rubber casters ensure easy mobility of the TC-65 when folded for storage. Sico Mfg. Co., Inc., 5215 Eden Ave. S., Minneapolis 24, Minn.

For more details circle #900 on mailing card.

### Breaded Beef Steak in Four-Ounce Portion

Made of mildly spiced chopped and cubed beef coated with golden breading, a new four-ounce steak can be served at a meat portion cost under 20 cents. Practical for school and other institutional food service, the Western Ranch brand steaks are packed 40 to a 10-pound carton, and can be removed individually without defrosting the remainder and deep-fat fried in three to five minutes. Armour & Co., P.O. Box 9222, Chicago 90.

For more details circle #901 on mailing card.

### Drum Adaptor for Use With Vacuum Power Unit

Any General 4-Star Series E-Con-O-Vac Industrial Vacuum Cleaner can be



used with the new General Drum Adaptor and Power Unit for maximum tank capacity in cleaning. The Drum Adaptors fit any drum or container, providing the diameter is 17 inches minimum and the capac-

ity no more than 55 gallons. Power Units and Drum Dollies can be purchased separately for use on 30 to 55-gallon drums. General Floorcraft, Inc., 3630 Rombouts Ave., Bronx 66, N.Y.

For more details circle #902 on mailing card.

### "Foto-Rex" Typesetter in Low-Priced Machine

A low-priced photo composing machine for preparing headlines, paste-ups, layouts and other printing processes, including duplicating, is available in the new "Foto-Rex" Typesetter. It is a simple, practical machine designed for trouble-free operation without special training. Hundreds of complete "Foto-Rex" alphabets from 14 to 72 points are available, as well as hand-

lettered styles. Each letter is a separate unit for easy handling. The machine is



lightweight and compact, occupying minimum space in use. Electro-Rex Corp. of America, 387 Park Ave., New York 16.

For more details circle #903 on mailing card.

(Continued on page 126)

## PHILCO CLOSED-CIRCUIT TV brings new flexibility to teaching



Philco, pioneer in fully-transistorized closed-circuit television, offers completely integrated instructional TV systems for schools and hospitals. Philco systems provide the ultimate in flexibility, incorporating any number of cameras, monitors, receivers and amplifiers, interconnected through a central console or a "patch panel" ... with provisions for two-way conversations. Philco equipment is reliable, easy to operate and low in cost. Philco will help you design a system to meet your requirements. Write for information and your Philco Closed-Circuit TV Planning Guide.

### Government & Industrial Group

4700 Wissahickon Ave., Phila. 44, Pa.

In Canada: Philco Corp. of Canada, Ltd., Don Mills, Ont.

# PHILCO®

*Famous for Quality the World Over*



The World's First Integrated Hospital Closed-Circuit TV System was recently installed by Philco at St. Christopher's Hospital for Children, Philadelphia. It links the main operating room, lecture halls, auditorium, pediatric treatment rooms, psychologic observation rooms and the radiology department. Folder describing this system will be sent upon request.



### Medallion Language Laboratory Has All-Transistor Recorder

Transistorized components especially built for educational use are used through-



out the Medallion language laboratory which features expandability in two directions. The electronic system can be upgraded in instructional level as well as in the number of students accommodated.

Installed economically for a limited number of students, the Medallion can be expanded to include up to 50 students as demands increase. Simple, plug-in electronic units added to existing positions provide higher-level teaching and student participation without obsoleting any part of the original equipment. Every unit is engineered expressly for language teaching, as a result of a DuKane research project in cooperation with Morrison Recording Laboratories. The Medallion is a complete laboratory facility and includes the instructor's console, scientifically designed student booths, and all of the electronic components required for a complete teaching job at all levels of instruction. **DuKane Corp., St. Charles, Ill.**

For more details circle #904 on mailing card.

### Mounted Glazed Tile for Speedy Installation

Speed, ease of installation and economy are advantages claimed for the new type of mounted glazed tile called Master-Set. The tiles are mounted on a specially developed paper-thin sheet, which permits the placing of twelve ceramic tiles at one time. The thin sheet mounting is tough enough to hold tiles rigidly in place, thin enough to fit snugly on walls with a tight bond, and flexible enough to conform to wall contours. Individual tiles or sections



can be cut or snapped from the sheet easily and quickly when desired. **American Olean Tile Co., Inc., Lansdale, Pa.**

For more details circle #905 on mailing card.

## Tailor-Made University Off-Street Parking



### PARCOA® Will Solve Your Parking Problems

Before deciding on any parking control system—investigate Parcoa. Wherever parking congestion exists, Parcoa can be relied on to handle your traffic smoothly, safely, efficiently, and economically—all without the need for attendants.

You have full control of parking, day and night. Parcoa engineers can install a parking system fitted to your specific needs with the overall installation based on the many successfully operating Parcoa automatic systems.

PARCOA engineering gives you every possible benefit resulting from years of experience in designing off street parking facilities.

PARCOA affords complete installation and operating simplicity—the answer to controlled parking and/or good income.

PARCOA means low first cost . . . minimum operating cost and an operation that actually pays for itself.

Investigate Parcoa. Write today for bulletin No. 580 or call one of the offices listed below.

Attention distributors: Choice territories available.

#### FLEXIBLE OPERATION

These control types give you a choice of individual or combination of controls to fit your needs.



**CODED CARD-KEY**  
for cars parking on monthly or reserved basis.



**COIN OPERATION**  
for controlled transient parking.

**TICKET ISSUING SYSTEM**  
for merchants restricted free parking service.



**TIME-DATED TICKET DISPENSER**  
for automatic self service in merchant parking.

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SINCE 1909  
Systems

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San Francisco 3, Calif. ATLANTA: 741 Boulevard N. E., Atlanta 5, Georgia.

SALES AND SERVICE OFFICES IN OTHER MAJOR CITIES LISTED UNDER BOWSER, INC.

### Germproof Toilet Seat Utilizes Chemical Discovery

A new chemical discovery known as Corobex is introduced into the melamine-alkyd finish of the new Puritan Style 600A germproof toilet seat, making it odor, mold and mildew-proof, in addition to protecting against bacteria. When washed with soap and water, Puritan seats are sanitary and the germproof qualities have been certified through extensive checks. The new seats have life-time Celanese Fortiflex plastic hinges. **Century Products, Inc., 3510 Chatham Ave., Cleveland 13, Ohio.**

For more details circle #906 on mailing card.

### Glidorama Window Wall System Is Completely Pre-Assembled

Completely pre-assembled to architectural specifications, the new Glidorama Window Wall System offers a wide assortment of special extrusions to meet installa-



tion requirements. It is designed to save labor costs at the construction site, and units are ordered with all-glass elements or double faced sandwich panels. Walls are available with wide choices of design, fabricated in single or double story heights. **Glidorama Div., Whizzer Industries, 360 S. Sanford, Pontiac, Mich.**

For more details circle #907 on mailing card.



## Literature and Services

• A 20-page booklet prepared by Herman Nelson School Air Systems Division of American Air Filter Co., Inc., 215 Central Ave., Louisville 8, Ky., presents the argument for "School Air Conditioning — an important new influence in educational planning." Subjects covered include why air conditioning is important in school planning, how air conditioning for schools differs from that for other buildings, its influence on students, teachers, administrators and the community, and results of a study of the savings effected in an actual community where provision was made for air conditioning in the original school plans.

For more details circle #908 on mailing card.

• An attractive 88-page catalog illustrates the line of fine wood furniture available from Thonet Industries, Inc., One Park Ave., New York 16. The furniture shown is specifically designed and engineered for use in schools, colleges, hospitals and other institutions, and includes a full line of tables, chairs, sectional units, desks, storage cabinets, stools and other items. Detailed information on the careful construction of the furniture is included in Catalog 5801, together with photographs of installations.

For more details circle #909 on mailing card.

• Celtex Light Control Draperies for audio-visual use are described, with architectural specifications, in a folder issued by Colonial Plastics Co., 108 S. Foushee St., Richmond, Va. The leaflet lists the various styles and degrees of light control in which the fire-safe drapery is available.

For more details circle #910 on mailing card.

• Porter Gymnasium Apparatus is the subject of a 16-page catalog available from Porter Athletic Equipment Co., Schiller Park, Ill. The full line of equipment for every gymnasium use, including the new self-closing floor anchor, is illustrated and described.

For more details circle #911 on mailing card.

• "Educational Aids for Schools and Colleges" are listed and described in the 1959-60 catalog published by the National Assn. of Manufacturers, 2 E. 48th St., New York 17. Motion pictures, pamphlets and teacher reference materials are included.

For more details circle #912 on mailing card.

• Contract Sleep Equipment for dormitories, hospitals and other institutions is the subject of a catalog recently released by Columbia Bedding Co., 1750 N. Wolcott Ave., Chicago 22. Illustrations of construction details are presented in the 16-page booklet with technical information to assist administrators and purchasing agents in their selections.

For more details circle #913 on mailing card.

• Those responsible for the purchase and preparation of meat will find the Pfaltzer Buyer's Guide and Price List helpful in selection, as well as in figuring portion costs. Portion Perfect meats are explained, with information on the company and its innovations in meat handling. The booklet is available from Pfaltzer Bros., 939 W. 37th Place, Chicago 9.

For more details circle #914 on mailing card.

• The complete line of portable science tables manufactured by Laboratory Furniture Co., Inc., Old Country Rd., Mineola, L.I., N.Y., is described and illustrated in Bulletin P10 released by the manufacturer. Included are the fully equipped "Instructo-lab" science center, demonstration fume hood, apparatus tables and carts.

For more details circle #915 on mailing card.

• Aristocrat IV Filing Cabinets are described in Brochure LBV 743 available from Remington Rand Div. of Sperry Rand Corp., 315 Park Ave. S., New York 10. The 12-page booklet lists and illustrates the models and accessories included in the Aristocrat IV line and contains suggestions for efficient and economical filing systems.

For more details circle #916 on mailing card.

• Actual Underwriters Laboratories fire-tests and applications of a new metal and glass fire and smoke screen are shown in an eight-minute 16mm sound color film available on a free loan basis to administrators and architects for showing to groups interested in fire protection. The film, "Fire Barriers by Overly," is available from Overly Mfg. Co., Greensburg, Pa.

For more details circle #917 on mailing card.

• Designs embossed in architectural porcelain enamel on steel for architectural use are pictured in a folder entitled "Sculpturama" available from Davidson Enamel Products, Inc., 1104 E. Kibby, Lima, Ohio.

For more details circle #918 on mailing card.

(Continued on page 128)

## Select Durable

# TOLEDO

## SCHOOL FURNITURE



Electronic laboratory equipped with adjustable Toledo Stools and Work Tables.

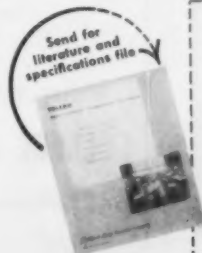


Science classroom has sturdy, attractive Toledo Tables and Stools.

TV workshop of school laboratory has Toledo Adjustable Posture Chairs.

## ...for science classrooms, laboratories and Other Special Needs!

Look into Toledo's complete line of chairs, stools, desks, tables, machine stands . . . ideal for efficient laboratories, science classrooms, commercial departments, cafeterias, other special uses. Toledo furniture serves in leading colleges and universities. It's backed by 60 years of metal-engineering experience . . . the wise choice for dollar-saving durability, functional design and low maintenance.



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SCHOOL \_\_\_\_\_

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CITY \_\_\_\_\_ STATE \_\_\_\_\_



• A convenient guide on how to achieve maximum results from a microfilm system is offered by Charles Bruning Co., Inc., 1800 W. Central Rd., Mount Prospect, Ill. The illustrated booklet, "Basic Microfilm Indexing and Filing Techniques," explains methods of successful indexing and filing, discusses ways to photograph records and graphically treats other subjects, including visual and mechanical indexing aids.

For more details circle #919 on mailing card.

• Catalog 97 illustrates and describes the line of toilet compartments, shower stalls and hospital cubicles manufactured by Sanymetal Products Co., Inc., 1696 Urbana Rd., Cleveland 12, Ohio. The 32-page booklet includes architectural specifications; information on new types of urinal screens; a description of the new Sanyvinyl-Metal finish; details of engineering developments, and a page of chips showing the colors available.

For more details circle #920 on mailing card.

• How Armstrong's new fire protective acoustical ceiling tile, Acoustical Fire Guard, saves time and money in institutional construction where rated fire protection is required is the subject of discussion in a new 12-page booklet available from Armstrong Cork Co., Lancaster, Pa. Entitled "The First Acoustical Ceiling Tile to Offer Rated Fire Protection," the booklet specifically cites time saved in school construction when Acoustical Fire Guard is used and uses case histories to prove the points mentioned.

For more details circle #921 on mailing card.

• Catalog F-146, listing Onan Electric Plants to provide "Power and light for every need," is now available from D. W. Onan & Sons Inc., 2515 University Ave. S. E., Minneapolis 14, Minn. The two-color, eight-page folder lists more than 45 basic models in the company's standard line and includes data on the high-capacity electric generating plants recently introduced.

For more details circle #922 on mailing card.

• Step-by-step instructions for cleaning and maintaining all popular types of hard and resilient floors are provided in a handy pocket-sized booklet, "How to Cut Overhead Underfoot," available from Advance Floor Machine Co., Spring Park, Minn. Printed in color and black and white, the manual illustrates the action and gives suggestions for selecting the proper equipment and cleaning supplies. Work-planning schedules and job time requirements are also included in the 40-page manual.

For more details circle #923 on mailing card.

• The Wittenborg "400," a vending machine that can dispense anything from toothpaste to a full meal, is described in a folder, "The Major Advance in Automatic Selling," available from Wittenborg, Inc., 169 Gardner Ave., Brooklyn 37, N.Y. The "400" permits variety, making it possible to vend up to 12 selections at different prices from one machine. It will hold as many as 12 adjustable shelves which can be raised or lowered to accommodate the varied sizes of the items to be dispensed.

For more details circle #924 on mailing card.

• "ScholarCraft — Their Future" is the title of an illustrated 8-page catalog of school furniture. The ScholarCraft line, manufactured by Southeastern Metals Co., School Furniture Div., 3925 N. 29th St., North Birmingham 7, Ala., is designed with studied simplicity and sturdily constructed to withstand severe usage while providing years of economical service.

For more details circle #925 on mailing card.

• The Nelly Bly steamship cruise takes teachers around the world for the all-inclusive price of \$1795. Literature on this unusual opportunity for teachers to see the world is available from The Four Winds Travel, Inc., 175 Fifth Ave., New York 10. The 55-day tour leaves New York City June 30.

For more details circle #926 on mailing card.

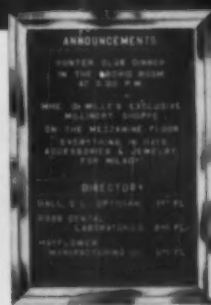
• A condensed four-page catalog, Form No. 1060, showing the complete line of Cleveland Steam-Cooking Equipment, including the newest steamer-kettle combinations, is available from the Cleveland Range Co., 971 E. 63rd St., Cleveland 3, Ohio.

For more details circle #927 on mailing card.

• "Individual Power Supplies" for general science, biology, chemistry and combination laboratories are described in Bulletin 106 available from the Hampden Engineering Corp., 99 Shaker Rd., East Longmeadow, Mass. The three electrical power supply models presented in the bulletin are for portable use, for permanent mounting in laboratory tables, and for bench-top mounting.

For more details circle #928 on mailing card.

## MAKE SURE IT'S READ... MAKE SURE IT'S A DAV-SON BULLETIN BOARD



### CHALK BOARDS

All sizes, in black or green, smooth Dur-O-Plate surfaces.

**CHANGEABLE LETTER STYLES**  
for indoors or outdoors, with or without glass doors and lighting, metal or hardwood frames.

**TYPES & STYLES FOR EVERY NEED**  
Handsome, sturdy, highly visible and attention-compelling, DAV-SON BULLETIN BOARDS get the message across quickly and surely.

### CORK BOARDS

Wide selection, self-sealing, in metal or wood frames. With or without glass doors and lights.



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It costs but 30c a word (minimum charge of \$6.00) to place your story before the administrative officers of colleges and universities in this country and Canada.

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# INDEX TO ADVERTISEMENTS

## USE THIS PAGE TO REQUEST PRODUCT INFORMATION

The index on this and the following page lists advertisements in this magazine alphabetically by manufacturer. For additional information about any product or service advertised, circle the manufacturer's key number on the detachable postcard and mail it. No postage is required.

Products described in the "What's New" pages of this magazine also have key numbers which appear in each instance following the description of the item. For more information about these items, circle the appropriate numbers on the postcard and mail it, without postage, to College & University Business.

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I am interested in the items circled—

May, 1960

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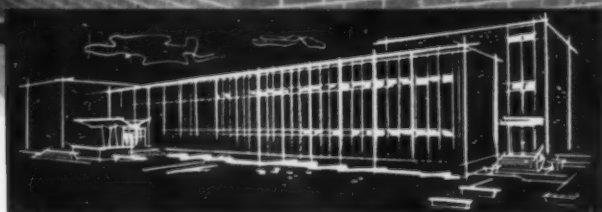
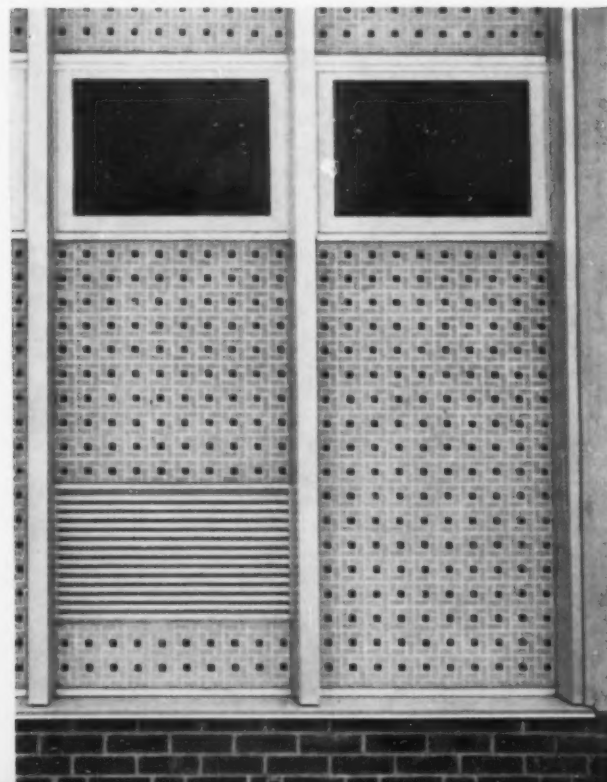


Plate No. 1065 New Science Hall, THIEL COLLEGE, Greenville, Pa.  
Architects: LOUIS G. MARTSOLF & ASSOCIATES, New Brighton, Pa.  
Panels installed by: NEWMAN BROS., INC., Cincinnati, Ohio



## CERAMIC TILE CURTAIN WALL PANELS

offer new freedom in exterior design



Close-up showing detail of  
RS Ceramic Tile Panels design

Used alone, or in conjunction with conventional exterior finishes, RS Ceramic Tile Panels offer the designer unlimited latitude in choice of color, texture and pattern. Here is the permanence and maintenance-free beauty of time-proven ceramic tile, delivered to job-site in light-weight, custom-made prefabricated units, ready for simple, speedy erection in any frame. A favorable unit price combined with low installation cost makes RS Panels an outstanding value. Your architect can provide more information. If you're interested in the technical details, write for Bulletin RSP-202. Ceramic Tile Panels, Inc., Dept. CU-12, Canton 2, Ohio.

**RS**



ROMANY • SPARTAN

*Panels*

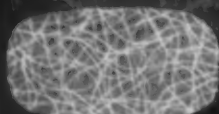
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*A subsidiary of United States Ceramic Tile Co.*

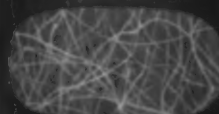


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FIBER-GLASS TRAY!**

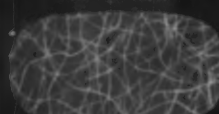
LIGHT WOODGRAIN



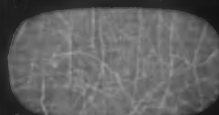
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TRACERY (Red)



TRACERY (Grey)



TRACERY (Blue)

A PRODUCT OF  
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The General Tire  
& Rubber Company

**rugged, distinctive, lightweight**

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*Bolta glas* by *Bolta*

**SO  
MANY  
WAYS  
BETTER**

- Superior surface abrasion - resistance!
- Made of highest - grade Fiber-Glass and resins — with a transparent-glass "shield" for added protection.
- High impact-resistance.
- Won't warp . . . resists stains and fading . . . cleans easily.
- Impervious to food acids, alcohol, fruit juices.
- Can be autoclaved at 250° — a "must" for hospital use.
- 2 smart patterns . . . 6 decorator colors . . . 3 popular sizes.

There has never been a Fiber-Glass tray like this before — and only Bolta's superior know-how and facilities could bring it to you. Scrape Boltaglas with a dime — it won't "powder." Rub your finger across its rugged surface — it has no sticky feeling. Bend it on your knee — there's no metal rim to distort. For the ultimate in fine service, specify Boltaglas.

**THE GENERAL TIRE & RUBBER COMPANY**  
BOLTA PRODUCTS DIVISION • LAWRENCE, MASS.



